

ENVIRONMENTAL EVALUATION OF FACILITIES DEVELOPMENT ACTIONS

Wisconsin Department of Transportation

Basic Sheet 1

Project ID 1195-01-00	Project Termini From: 0.75 mile north of Schnagel Road in Washburn County To: Wascott/Gordon Town Line in Douglas County	Funding Sources - Check all that apply <input checked="" type="checkbox"/> Federal <input checked="" type="checkbox"/> State <input type="checkbox"/> Local (No project or construction dollars programmed. Future funding could include Federal or State funding sources.)								
Route Designation (if applicable) USH 53 National Highway System (NHS) Route <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Nearest Community Town of Brooklyn Village of Minong Town of Minong Town of Wascott	Estimated Project Cost (millions) Total: \$60.7 million (year 2013) Real Estate Acquisition Portion of Estimated Cost Total: \$1.7 million (see Basic Sheet 5 for project cost details)								
Project Name US 53 Corridor Preservation, Minong Area		Right of Way Acquisition <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 40%;">Acres</th> </tr> </thead> <tbody> <tr> <td>Fee</td> <td style="text-align: center;">88.6</td> </tr> <tr> <td>TLE</td> <td style="text-align: center;">*</td> </tr> <tr> <td>PLE</td> <td style="text-align: center;">*</td> </tr> </tbody> </table> * Easements to be determined during design		Acres	Fee	88.6	TLE	*	PLE	*
	Acres									
Fee	88.6									
TLE	*									
PLE	*									
County Washburn and Douglas	Section-Township-Range See Basic Sheet 2, Item 2									
Bridge Number(s), if applicable Bridge numbers to be determined. Four proposed bridges (County F, WIS 77, Shell Creek Road, County T)	Scheduled start date (Operational Planning Meeting (OPM), or specify other) Study Start Date: 2007 Official Map Date: 2014 Construction project start date dependent on funding and need.									

Functional Classification of Existing Route	Urban	Rural
Freeway/Expressway	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Principal Arterial	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Minor Arterial	<input type="checkbox"/>	<input type="checkbox"/>
Major Collector	<input type="checkbox"/>	<input type="checkbox"/>
Minor Collector	<input type="checkbox"/>	<input type="checkbox"/>
Collector	<input type="checkbox"/>	<input type="checkbox"/>
Local	<input type="checkbox"/>	<input type="checkbox"/>
No Functional Class	<input type="checkbox"/>	<input type="checkbox"/>

WisDOT Project Classification	
Resurfacing	<input type="checkbox"/>
Pavement Replacement	<input type="checkbox"/>
Reconditioning	<input type="checkbox"/>
Expansion	<input type="checkbox"/>
Bridge Rehabilitation	<input type="checkbox"/>
Bridge Replacement	<input type="checkbox"/>
A "Majors" Project	<input type="checkbox"/>
SHRM	<input type="checkbox"/>
Preventive Maintenance	<input type="checkbox"/>
Safety	<input type="checkbox"/>
Other - Corridor Preservation	<input checked="" type="checkbox"/>

FHWA Categorical Exclusion, Type 2c

FHWA Environmental Assessment. No significant Impacts Indicated by Initial Assessment.

<p><u>[Signature]</u> 2/10/14 Project Manager</p> (Signature) (Company/Org.) (Date) (Title)	<p><u>[Signature]</u> 2/17/14</p> (Signature) (Date) (Title) (Director, Bureau of Technical Services)
<p><u>[Signature]</u> 2/10/2014 PM</p> (Signature) (Date) (Title) <input checked="" type="checkbox"/> Region <input type="checkbox"/> Aeronautics <input type="checkbox"/> Rails & Harbors	<p>_____</p> (Signature) (Date) (Title) <input type="checkbox"/> FHWA <input type="checkbox"/> FAA <input type="checkbox"/> FTA <input type="checkbox"/> FRA

After reviewing public comments and coordinating with other agencies, it is determined that this action:

- A) Will not significantly affect the quality of the human environment. This document is a:
 - Finding of No Significant Impact (FONSI)
- B) Has potential to significantly affect the quality of the human environment:
 - Environmental Impact Statement (EIS) Required

_____ (Signature) (Company/Org.) (Date) (Title)	_____ (Signature) (Date) (Title) (Director, Bureau of Technical Services)
_____ (Signature) (Company/Org.) (Date) (Title)	_____ (Signature) (Date) (Title) <input type="checkbox"/> FHWA <input type="checkbox"/> FAA <input type="checkbox"/> FTA <input type="checkbox"/> FRA

Basic Sheet 2

1. Purpose and need of proposed action:

Purpose of the Proposed Action

Purpose of the Proposed Action

The purpose of the US 53 Corridor Preservation Project, Minong Area project is to officially map the proposed enhancements to the US 53 expressway in order to address the following three needs:

- Corridor preservation
- Safety, operation, and mobility
- Land Use/Transportation Planning and Coordination

The Wisconsin Department of Transportation (WisDOT) would pursue official mapping and preservation of the corridor through Wisconsin State Statute 84.295. Wis. Stat. 84.295 is a long-term official mapping and planning tool available to WisDOT to help protect and preserve right-of-way for future transportation needs. This proactive tool allows WisDOT to address safety, operation, mobility, and capacity issues in advance of impending long-term needs.

The Proposed Action to preserve US 53 as an expressway through official mapping is a long-term, proactive planning initiative to preserve future highway right-of-way from further development. The Proposed Action would be used as a long-term vision and management strategy so that when improvements become necessary, a comprehensive approach can be applied to the corridor.

Project Funding

There are no immediate project or construction dollars programmed for the proposed improvements. In the near term, the proposed action includes officially mapping proposed grade separations of US 53 at County F and Wisconsin State Trunk Highway (WIS) 77 in Washburn County, and County T in Douglas County (see Figure 1, Appendix A). As described above, official mapping is one is a long-term proactive planning tool available to WisDOT to preserve highway right of way for future transportation needs. The proposed action would be used as a long-term management strategy so that when funding becomes available, improvements can be phased incrementally, and a comprehensive approach can be applied to the project corridor.

Project Termini

The southern project terminus is located along US 53 at point approximately 0.75-mile north of Schnagel Road. The northern project terminus is located at County T. The project location is shown in Figure 1, Appendix A.

Need for the Proposed Action

Background Information (Role of US 53 in the Transportation System)

US 53 is part of WisDOT's *Corridors 2020 Plan* and *Connections 2030 Plan*. The *Corridors 2020 Plan* identifies this highway as a "Backbone" route between the Duluth/Superior area on the Minnesota/Wisconsin border and Interstate 94 (I-94) in Eau Claire, Wisconsin. "Backbone" routes connect major population and economic centers and provide economic links to national and international markets. As a principal arterial highway, US 53 functions as a high mobility roadway, connecting southern Wisconsin and northern Illinois to the Duluth/Superior area, the ports of Lake Superior, and northern Minnesota and western Canada.

The WisDOT *Connections 2030 Plan* identifies 37 system-level priority corridors throughout the State of Wisconsin that are critical to the State's travel patterns and support the State's economy. These system-level priority corridors build upon the backbone system and connector system identified in the *Corridors 2020 Plan*. As described in the *Connections 2030 Plan*, each of these system-level priority corridors represent "a broad geographical band that follows a general directional flow connecting trips that may include streets, highways, rail, pedestrian, bicycle facilities and routes and transit route alignments. A corridor generally follows the directional flow of a state highway alignment.

It includes parallel state and local roads, service roads and facilities for other transportation modes, such as rail, pedestrian, and transit, which influence the mobility, capacity, safety and other functional elements of the corridor.”

The Peace Memorial Corridor is one of the 37 system-level priority corridors identified in the *Connections 2030 Plan*. The Peace Memorial Corridor is a 150-mile system-level priority corridor in the northwest portion of Wisconsin (Douglas, Washburn, Barron, Chippewa, and Eau Claire counties). This corridor is part of a major passenger and freight corridor that links southern Wisconsin and Chicago, IL to Duluth-Superior, northern Minnesota, and western Canada, providing critical economic links between population centers, as well as connections to recreation and tourism areas of northwestern Wisconsin. US 53 is a National Highway System (NHS) route, and is the primary highway and Corridors 2030 Backbone route associated with the Peace Memorial Corridor.¹

The US 53 corridor has long been recognized as an important transportation route and efforts to convert the roadway to a freeway/expressway were initiated as early as the 1960s. The upgrade of the portion of US 53 between Lampson and Gordon from a two-lane highway to a four-lane highway was completed in 1997, improving connectivity to major economic and population centers in Wisconsin. This principal arterial highway currently consists of two travel lanes in both the northbound and southbound directions, separated by a grassed or wooded median. County F, WIS 77, County T, as well as other local roads and driveways intersect US 53 at grade. There are no existing interchanges along this portion of US 53. Within the study area, US 53 serves as the main stem from which local and county roads branch to form the local transportation network, connecting the Towns of Brooklyn, Minong, Wascott, and the Village of Minong.

Need for the Proposed Action

The need for the proposed action can be divided into the following components:

- Corridor preservation
- Safety, operation, and mobility
- Land Use/Transportation Planning and Coordination

Corridor Preservation

There is a need to identify and preserve future locations for access changes and local circulation along the US 53 corridor. As a rural principal arterial highway, the function of US 53 is to provide mobility at the regional and state levels. A well-developed access management plan for US 53 between Schnagel Road and County T would help protect the public’s multimillion dollar investment to upgrade US 53 from a two-lane to a four-lane facility and ensure the long-term safety and mobility of US 53. If the safety and/or level of service decline, the result would be a diminishing return of the investment already made in the corridor.

Without proactive corridor preservation, local development could occur on land needed for future corridor improvements. If this local development were to occur, the range of future enhancement options to avoid undesirable social, economic, and environmental consequences would be diminished. For example, right of way and relocation costs could be greatly reduced by averting development in areas that have been mapped for corridor preservation. If not mapped for corridor preservation, enhancement options that would avoid local development could subsequently result in substantial impacts to natural resources such as floodplains, wetlands, streams, public lands, and wildlife habitat. Impacts to historic and archaeological sites and social impacts due to the relocation of homes, businesses, and farms is likely. Conversely, enhancement options to avoid impacts to natural and cultural resources would likely result in substantial right of way impacts to local development. Through the implementation of Wisconsin State Statute 84.295, corridor preservation would help protect and preserve US 53 through a proactive, rather than a reactive, management approach.

¹ Connections 2030 – System-level priority corridor maps. Peace Memorial Corridor – Chippewa Falls-Eau Claire to Duluth-Superior accessed 04/16/2013 at <http://www.dot.wisconsin.gov/projects/state/docs/corridor-peace.pdf>.

Safety, Operations, and Mobility

The US 53 project corridor was evaluated based on traffic volumes, land use, and current and potential high crash locations. Three US 53 intersections were noted as having higher volumes, higher crash rates, or a potential for a higher crash rate relative to other locations along the project corridor. The three intersections are County F near Lampson, WIS 77 in Minong, and County T in Wascott (see Figure 2, Appendix A). Existing and forecast volumes for US 53, County F, WIS 77, and County T are described below, followed by a discussion of at-grade crossings and crash rates.

- Existing Traffic Volumes:** Existing (2010) traffic volumes on the US 53 project segment are tabulated below in Table 1. Existing traffic volumes on US 53 range from approximately 4,500 vehicles per day (vpd) south of County F to approximately 6,200 vpd north of County T. Traffic volumes on intersecting highways vary, ranging from approximately 110 vpd on County F (west of US 53) in the Town of Brooklyn up to 3,000 vpd on WIS 77 (east of US 53) in the Village of Minong. In general, traffic volumes on US 53 near County F and WIS 77 have decreased slightly over the past decade, whereas volumes on US 53 near County T have generally remained unchanged.

Table 1. Existing and Future Traffic Volumes

Highway	Location	Existing (2010) Traffic Volumes (vpd) ⁽¹⁾	Future (2030) Traffic Volumes (vpd)
US 53	South of County F	4,500	5,700
	North of County F	5,200	6,500
	South of WIS 77	4,000	5,000
	North of Shell Creek Road	4,700	5,500
	North of County T	6,200	7,400
County F	East of US 53	690	810
	West of US 53	110	290
WIS 77	East of US 53	3,000	3,800
	West of US 53	2,700	3,300
County T	West of US 53	410	670

(1) Existing volumes for US 53, WIS 77, County F (west of US 53), and County T from year 2010 counts. Existing volumes for County F, east of US 53, from year 2002 counts.

- Future Traffic Volumes:** Despite the economic downturn that resulted in more recent decreases in traffic volumes, the long-term general trend indicates growth in future traffic volumes. Forecast (2030) traffic volumes on the US 53 and intersecting highways are also tabulated in Table 1. In general, volumes are projected to increase by approximately 1,000 vpd between 2010 and 2030 on the project segment of US 53. By year 2030, US 53 volumes are projected to range from approximately 6,500 vpd at County F to approximately 7,400 vpd north of County T. Year 2030 projected traffic volumes on intersecting highways vary, ranging from approximately 290 vpd (west of US 53) in the Town of Brooklyn up to 3,800 vph on WIS 77 (east of US 53) in the Village of Minong.
- At-Grade Crossings:** At-grade crossings along US 53 exist at state trunk highways, county trunk highways, local roads, and private driveways. All access points are stop controlled, with no control on the mainline. Movements to and from the intersecting roads can disrupt the flow of traffic as vehicles merge, diverge, or cross over US 53. Recreational vehicles and farm equipment can also further contribute to declines in mobility along the corridor.

There is a direct correlation between increasing traffic volumes and vehicle conflicts when direct access exists on a roadway. The long-term trend is for traffic to increase on US 53 over time. Therefore, the ability to access or cross US 53 from connecting roads would likely become more difficult because the frequency and duration of gaps in traffic would decrease. As a result, the number of conflicts with vehicles entering and exiting the existing access points along the corridor could also be expected to increase, resulting in a greater number of crashes and other operational and safety concerns. Without effective proactive management of the corridor, the long-term result would be a continued degradation of safety and operational efficiency.

- Crash Rates:** The number of crashes (excluding deer crashes) recorded at the intersections of US 53 and County F, WIS 77 and County T are tabulated in Table 2 for the five-year period from 2006-2010. Of the 14

crashes recorded at these three intersections during this timeframe, 11 crashes (more than 75 percent) occurred at the WIS 77 intersection in Minong.

Table 2. Intersection Crashes 2006 – 2010: US 53 at County F, WIS 77 and County T

	US 53 Intersections		
	County F	WIS 77	County T
Number of Crashes	0	11	3

The crash rate at the intersection of US 53 and WIS 77 during the 2006-2010 time period is 0.85 crashes per one million entering vehicles (MEV), which is less than the statewide average for similar roadway types (see Table 3). As described above, traffic volumes on US 53 are projected to increase by approximately 1,000 vpd by year 2030, whereas traffic volumes on WIS 77 are projected to increase by approximately 500 to 800 vpd. As traffic volumes increase in Minong along US 53 and WIS 77 over time, users would take more risks to enter or cross US 53, and safety problems at the US 53/WIS 77 intersection would likely increase.

Table 3. Intersection Crash Analysis 2006 – 2010: US 53 at WIS 77

	US 53 at WIS 77 At-Grade Intersection ⁽¹⁾	Statewide Average ⁽¹⁾
Crash Rate (11 crashes) ⁽¹⁾	0.85 per MEV	1.5 per MEV

MEV = per one million entering vehicles

(1) Crash data and statewide average for Years 2006 – 2010

Changes in crash rates tend to follow changes in traffic volumes. Crash data on state highways such as US 53 clearly demonstrate the safety issues when higher volume side roads are left as at-grade intersections on four-lane facilities. In general, the number of intersection crashes tends to increase when mainline volumes approach 10,000 vpd and volumes on intersecting side roads approach 1,000 vpd. The frequency of intersection crashes on US 53 at County F, WIS 77, and County T have varied over time. For example, no crashes were recorded at the US 53 and County F intersection for the five year period from 2006-2010 as shown in Table 2; however, eight crashes were recorded at County F for the previous five year period from 2002-2006. A similar pattern was observed at County T. While three crashes were recorded at the US 53 and County T intersection for the five-year period from 2006-2010, 17 crashes were recorded at County T for the previous five year period from 2002-2006.

Consistent with the recent downtrend in traffic volumes in the project area, the number of intersection crashes at County F and County T decreased for the five year period from 2006-2010 relative to the number of crashes recorded for the previous five year period from 2002-2006. However, traffic volumes on US 53 are projected to increase by approximately 1,000 vpd by year 2030, while smaller increases are projected on County F and County T. While there is not an immediate safety problem at County F and County T as indicated by current crash data, this trend is expected to reverse with forecast increases in traffic volumes over time. Historic data indicate that there have been safety concerns in the past as evidenced by the greater number of crashes at County F and County T for the 2002-2006 period. As such, increasing traffic demands along US 53 could contribute to safety concerns at these two locations in the future.

Land Use/Transportation Planning and Coordination

Local land development has the potential to influence the future functionality of US 53. Although the existing land use along US 53 is primarily rural and agricultural, land development pressure could gradually convert some areas to more intensive uses, particularly near at-grade crossings (see existing land use maps in Appendix A).

Official mapping provides certainty to property owners and local communities regarding the future rights-of-way necessary for US 53 improvements. Mapping allows landowners, the public, businesses, and local agencies to plan their future in ways that are compatible with anticipated transportation improvements. Through planning and coordination, disruptions to property owners and costly relocations would be minimized. Without the planning framework that official mapping provides, local units of government lack the knowledge needed to adequately plan land use that is compatible with the future transportation needs of the corridor.

2. Summary of alternatives considered and if they are not proposed for adoption, why not:

No Action Alternative

With the No Action Alternative, there would be no official mapping along the US 53 Corridor Preservation, Minong Area project corridor. The No Action Alternative does not address the project purpose and need to proactively plan for, protect, and preserve future transportation improvements along the project segment of US 53. These improvements have been identified to address existing and emerging safety issues at US 53 and WIS 77, and potential future safety issues at the US 53 intersections at County F and County T. As US 53 traffic volumes increase over time, users will typically take more risks when entering the traffic stream from intersecting roadways, leading to potential future safety issues at these locations. For these reasons, the No Action Alternative is not identified as the preferred alternative, but is used as a baseline for comparing the Action Alternatives for US 53 at County F, WIS 77, and County T described below.

Action Alternatives

Facility Identification and Corridor Constraints

The portion of US 53 that falls under this study is characterized by few parallel local roadways, intersecting local roadways with no alternative connections other than with US 53, and numerous parcels abutting the highway. Therefore, in addition to functioning as a “backbone” route as described above, the US 53 project segment also provides much of the connectivity for the local road system. Lands surrounding the US 53 project corridor include large tracts of undeveloped land, environmentally sensitive areas, as well as commercial and residential development near the higher volume roadways.

Reducing access and converting the US 53 project segment to a freeway facility would require developing a substantial amount of local roadways to maintain connectivity of the existing local transportation system and to maintain access to abutting parcels. These roadways would often be located through large tracts of undeveloped land, impacting and potentially fragmenting surrounding natural areas. In addition, parcels for which access could not be readily maintained would be acquired, resulting in substantial right of way impacts. As such, the US 53 project corridor is proposed to remain as an expressway facility.

Alternatives Evaluation Process

Traffic volumes, land use and current and potential high crash locations were reviewed along the US 53 project corridor from the southern project terminus approximately 0.75-mile north of Schnagel Road in Washburn County to the northern project terminus at the Wascott/Gordon Town Line in Douglas County (see Figure 1, Appendix A). Through the analysis of potential and existing crash and mobility issues, along with public input, three at-grade intersection locations were identified along the project corridor as having higher traffic volumes, higher crash rates, or a potential for higher crash rates as described under the Safety, Operation, and Mobility section above. These at-grade intersections are located at the following three locations (see Figure 2, Appendix A):

- US 53 at County F (Sections 2 and 3, T40N, R12W) (Section 35, T41N, R12W)
- US 53 at WIS 77 (Sections 23, 26, and 35, T42N, R12W)
- US 53 at County T (Sections 25 and 36, T43N, R12W)

To address the project need, the existing at-grade intersections at County F, WIS 77 and County T are proposed to be replaced with grade separated intersections. Eliminating the existing at-grade intersections at these three locations and closing adjacent access points to US 53 would address the project need by enhancing safety. In general, grade separations of intersecting roadways are more safe than at-grade intersections because the grade separation eliminates conflicting movements (e.g., left-turns across high-speed through traffic).

The alternatives evaluation process for the US 53 Corridor Preservation, Minong Area project, was completed in two stages. The first stage considered a range of grade separation design concepts at the previously identified intersections of County F, WIS 77 and County T. The initial concepts were evaluated and narrowed down to a more reasonable range of concepts that were presented to the public, local officials and WDNR for review and comment. Following this public and agency input, the second stage included an additional evaluation of the grade separation

concepts. Potential impacts were identified and documented in a series of evaluation matrices. The preferred alternatives at County F, WIS 77 and County T were selected following this second stage. The preferred alternatives, along with the evaluation results, were then presented to the public, local officials and agencies for review and comment.

The brief summary of the alternatives evaluation for each of the locations is provided below. The more detailed discussion of the alternatives evaluation process for the US 53 Corridor Preservation, Minong Area Project is described in the *Alternative Selection Report* (June 30, 2009) included in Appendix B.

Action Alternatives – US 53 at County F

Existing County F intersects US 53 at two intersections offset from one another by approximately 1,000 feet. Physical constraints within the proximity of the County F intersection with US 53 include Silver Lake (east side of US 53), several wetland/water features (west side of US 53, and Lampson School/Brooklyn Town Hall (located in the northeast quadrant of the intersection). Lampson School/Brooklyn Town Hall is eligible for listing on the National Register of Historic Places (NRHP).

Alternative design concepts were developed to connect the east and west County F approaches to US 53 as a single, grade-separated interchange. The first step in the County F alternatives development process was to identify the location for the County F grade separation. Three locations near the existing US 53/County F intersection were considered: 1) the existing northern County F intersection with US 53, 2) between the two existing County F intersections with US 53, and 3) the existing southern County F intersection with US 53. These three locations were evaluated at a scoping/qualitative level based on a standard diamond interchange configuration (single directional ramp for each entrance and exit movement to and from US 53). A standard diamond interchange is the most prevalent interchange type found in rural areas. If substantial impacts were identified with the standard diamond interchange, then alternative ramp configurations were considered.

The existing southern County F intersection location was dismissed at the outset of the alternatives development process because of the amount of County F that would need to be relocated and potential impacts to an unnamed lake along the west side of US 53, south of County F. (see also the Alternatives Description and Discussion, Stage I in the *Alternative Selection Report* in Appendix B for additional information regarding the southern County F intersection location). A number of alternative design concepts were generated for the two remaining locations. These concepts were subsequently narrowed down to the four alternative grade-separated intersections listed below (see *Alternative Selection Report*, Appendix B). Impacts associated with the County F alternatives are summarized Matrix 1, Appendix C (Alternative Concept Evaluation – US 53 at County F).

- Alternative 1: Standard diamond interchange at northern County F intersection location. Alternative 1 would result in the greatest amount of wetland impacts among the County F alternatives. Alternative 1 would impact to Brooklyn Town Hall (eligible for listing on NRHP), and would result in greater right of way impacts compared to Alternative 4. Therefore, Alternative 1 was dismissed from further consideration.
- Alternative 2: Folded diamond interchange to the southeast and northwest quadrants, 1,300 feet between ramp intersections, County F crosses under US 53. Wetland impacts were minimized with Alternative 2 by realigning County F to the south of its current location. However, realigning County F contributes to substantial right of way impacts under Alternative 2. Therefore, Alternative 2 was dismissed from further consideration.
 - Sub-Alternative 2A: Same interchange configuration as Alternative 2 except County F crosses over US 53. Sub-Alternative 2A was developed to assess the potential impacts with County F crossing over US 53. Construction of County F over US 53 without any changes to the US 53 profile would result in substantial fill impacts to Silver Lake as well as properties along the south side of County F (see County F over US 53 plan sheets in *Alternative Selection Report*, Appendix B – Stage II). Grade changes to both US 53 (cut section) and County F (fill section) would be required to reduce side-slope impacts on Silver Lake and to properties along County F. The profile of US 53 would need to be depressed by more than 30 feet to accommodate adequate clearance from the County F crossing under Alternative 2A. Reconstruction of US 53 would substantially increase the project construction costs; therefore, the option of County F crossing over US 53 was dismissed from further consideration.
- Alternative 3: Folded diamond interchange to the southeast quadrant, 1,400 feet between ramp intersections, Birchwood Drive access at the east ramp intersection. Alternative 3 would result in the second greatest amount of

right of way impacts of the County F alternatives. Therefore, Alternative 3 was dismissed from further consideration.

- Alternative 4: Non-interchange grade separation. County F underpass with right-in, right-out local road access on the west and east sides of US 53 (“jug handle” configuration). Alternative 4 was identified as the preferred alternative for County F. See discussion below.

County F Preferred Alternative

Non-interchange “Jug Handle” configuration (Alternative 4)

The Preferred Alternative County F “jug handle” configuration is illustrated in Figure 1, Appendix D. The approximate length of the County F Preferred Alternative is listed below:

0.7 miles – County F

0.7 miles – Right-in/right-out local access road connections and side roads

0.4 miles – US 53 (right-turn lanes, bridges over County F, access closures)

1.8 miles – Total

The “jug handle” alternative is a non-interchange alternative that consists of a County F underpass with right-in, right-out access on the west and east sides of US 53. West of US 53, a two-lane roadway connects US 53 to County F. East of US 53, a two-lane roadway connects US 53 to County F, intersecting County F at the same location as Birchwood Drive. The Preferred Alternative removes the existing crossovers north and south of the proposed County F underpass. Access to residential properties in the southwest quadrant of the County F grade-separation would be replaced with an access to/from the proposed access road between US 53 and County F.

Due to lower traffic volumes on County F, and because the County F intersection does not currently have a crash problem, an interchange was determined not necessary at this location at this time; therefore, the “jug handle” alternative was identified as the Preferred Alternative for County F at US 53. The “jug handle” alternative has the smallest footprint and requires the least amount of local road construction of the alternatives considered, resulting in the least potential impacts (i.e., right of way and relocations) of the studied alternatives. The “Jug Handle” design at US 53 and County F does not preclude future staging of an upgrade to a full interchange over time. Following completion of the *Alternative Selection Report*, the County F “jug handle” design was further refined to avoid the Lampson Schoolhouse/Brooklyn Town Hall property.

Reconstruction of County F would extend approximately 1,500 feet to the east of US 53, adjacent to the south shoreline of Silver Lake. Reconstruction of this segment of County F was initially anticipated to result in minor fill impacts to Silver Lake (approximately 0.1 acres). Two design options were evaluated to avoid Silver Lake.

- A shift in the County F alignment to the south was first considered to avoid the south shoreline of Silver Lake. As described above, County F would pass under US 53 with the proposed grade separation. The proposed vertical profile of County F is depressed compared to existing topography (approximately 28 feet below the existing grade of northbound US 53). The existing grade of US 53 slopes downward toward the south. Additional shifts in the proposed County F alignment to the south would require the County F profile/elevation to be depressed further to maintain adequate clearance under US 53. This would extend the construction limits along County F to the east to tie into the existing roadway profile, and would extend the slope-intercept limits out further from County F to match existing topography, creating additional impacts (e.g., right of way) while still potentially impacting the south shoreline of Silver Lake. In addition, shifting the alignment of County F further to the south would also create additional right of way and wetland impacts west of US 53 as the County F alignment curves back to the north to match the existing roadway alignment. Therefore, shifting the County F alignment to the south was dismissed from consideration.
- A second County F option was then evaluated to avoid fill impacts to Silver Lake. This included reducing the County F design speed to 35 mph east of the County F/Birchwood Drive intersection. With a lower design speed, the proposed County F alignment and profile could be revised to match into the existing roadway alignment at a point located approximately 800 feet east of County F/Birchwood Drive. Under the original design, County F would match the existing roadway at a point located more than 1,200 feet east of County F/Birchwood Drive. The eastbound County F lane drop would be shortened, further minimizing the footprint of the proposed improvements. Under this design, the slope-intercept limits along County F would match existing right of way

limits and avoid fill impacts into Silver Lake, and would also minimize the amount of new right of way needed along County F. Because this design option would avoid fill impacts to Silver Lake and minimize right of way impacts, it was incorporated into the Preferred Alternative County F “jug handle” configuration. The Preferred Alternative County F alignment and design adjacent to Silver Lake is illustrated in Figure 1, Appendix D.

Action Alternatives – US 53 at WIS 77

Existing WIS 77 intersects US 53 near the western limits of the village of Minong. Commercial development is located in all four quadrants of the intersection. In addition, a number of residential properties with direct access to WIS 77 are located east of US 53.

The first interchange alternative developed was a standard diamond interchange at the existing WIS 77 intersection with US 53 (Alternative 1). Alternate locations to the existing intersection were then developed that would still provide access to the village of Minong but avoid impacts to properties adjacent to the existing intersection; however, moving the interchange to a new location would require a substantial amount of WIS 77 on a new alignment (Alternative 2). An alternate interchange configuration was then developed using the existing north and south Business 53 intersections with US 53 (Alternative 3 – split diamond interchange). This alternative would include reconstructing the existing WIS 77 intersection at US 53 as an overpass. Lastly, interchange alternatives were developed at the existing WIS 77 intersection with US 53 with varying ramp configurations (Alternative 4 through Alternative 6). These six interchange alternatives are listed below (see *Alternative Selection Report*, Appendix B). Impacts associated with the WIS 77 alternatives are summarized in Matrix 2, Appendix C (Alternative Concept Evaluation – US 53 at WIS 77).

- Alternative 1: Standard diamond interchange. Alternative 1 would impact commercial properties in the northwest quadrant of US 53/WIS 77, and potentially require the relocation of up to three commercial businesses. Therefore, Alternative 1 was dismissed from further consideration.
- Alternative 2: Standard diamond interchange, realigned WIS 77. Alternative 2 would place a standard diamond interchange south of the existing US 53/WIS 77 intersection, requiring WIS 77 to be constructed on a new alignment. Alternative 2 would result in the greatest right of way impacts of the alternatives studied at US 53 and WIS 77. Therefore, Alternative 2 was dismissed from further consideration.
- Alternative 3: Split diamond interchange. Alternative 3 includes half-diamond interchanges on the north and south ends of the Village of Minong. Alternative 3 would result in indirect access to WIS 77, diverting trips destined to and from WIS 77 west of the US 53 into the downtown area. This could potentially require additional improvements at the WIS 77 (West Hokah Street)/Business 53 intersection. Alternative 3 would also result in the greatest wetland impacts of the alternatives studied at US 53 and WIS 77. Therefore, Alternative 3 was dismissed from further consideration.
- Alternative 4: Tight diamond interchange. The tight diamond interchange under Alternative 4 would minimize potential right of way impacts; however, it would still impact commercial businesses in the northwest quadrant of US 53/WIS 77. Alternative 4 would potentially require the relocation of one to three businesses in the northwest and southwest quadrants of the interchange. Alternative 4 would also require a larger bridge on WIS 77 over US 53 to provide additional queuing space for turn movements. Therefore, Alternative 4 was dismissed from further consideration.
- Alternative 5: Folded diamond interchange, loop in the southwest quadrant of WIS 77 and US 53. Alternative 5 was identified as the preferred alternative for WIS 77. See discussion below.
- Alternative 6: Single point interchange. The single point interchange under Alternative 6 would minimize potential right of way impacts; however, Alternative 6 had the greatest cost estimate of the alternatives considered at US 53 and WIS 77. Alternative 6 was dismissed from further consideration because it did not provide enough benefit relative to the additional costs.

WIS 77 Preferred Alternative

Folded Diamond, Loop in Southwest Quadrant (Alternative 5)

The Preferred Alternative WIS 77 Folded Diamond, Loop in the Southwest Quadrant is illustrated in Figure 2A and 2B in Appendix D. The approximate construction length for the Preferred Alternative is listed below:

0.6 miles – WIS 77
3.0 miles – Ramps and local roads (includes Shell Creek Road overpass)
0.6 miles – Mainline reconstruction
1.4 miles – Mainline improvements (acceleration/deceleration lanes and median closures)
5.6 miles – Total

The Preferred Alternative at US 53 and WIS 77 is a folded diamond interchange with a loop in the southwest quadrant of the interchange. The US 53/WIS 77 Preferred Alternative interchange and locations of US 53 access closures are illustrated in Figure 2A and Figure 2B, Appendix D. This alternative includes backage roads on the west and east sides of US 53. On the west side, Newton Drive would require a relocated access to WIS 77 because of its close proximity to the proposed interchange. Access to WIS 77 would be provided via a backage road that begins near the southern terminus of Newton Drive and runs west and then north to connect to WIS 77. On the east side of US 53, a backage road would be constructed that runs north of Industrial Drive, crosses WIS 77, then travels westward to provide access to properties that would no longer have direct access to WIS 77 because of their proximity to the interchange.

The folded diamond interchange with a loop in the southwest quadrant was identified as the Preferred Alternative for the WIS 77 interchange because it minimizes impact to commercial properties, specifically a motor services orientated business in the northwest quadrant of the interchange. The folded diamond interchange with a loop in the southwest quadrant also minimizes the number of parcels affected and potential wetland impacts.

The Preferred Alternative also includes an overpass connecting Shell Creek Road and Business Route 53. This overpass was incorporated into the Preferred Alternative design in response to concerns from local officials regarding construction staging and for emergency services accessibility. Village of Minong emergency services serve areas to the west of US 53. The Shell Creek Road overpass would provide an alternative crossing over US 53 and maintains local access and mobility across US 53 north of the proposed interchange.

Action Alternatives – US 53 at County T

Existing County T intersects US 53 from the west. Red Lake Road intersects US 53 from the east, across from County T. Physical constraints within the proximity of the County T intersection with US 53 include a business in the northeast quadrant of US 53 and Red Lake Road, residences along the east side of US 53, an unnamed creek crossing of US 53, and large wetland complexes along both sides of US 53, north and south of County T and Red Lake Road.

Standard diamond interchange alternatives were developed for County T at two locations: 1) the existing US 53/County T intersection; and 2) County T realigned to the south of the existing intersection. Two options were identified for the County T realignment alternative. Option 1 consists of an east-west alignment across US 53, approximately 900 feet south of the existing County T intersection with US 53. Option 2 consists of an east-west alignment across US 53, approximately 800 feet south of the existing County T intersection with US 53. Option 2 follows an access road alignment along the west side of US 53, avoiding open water and minimizing impacts to the large wetland complex along the west side of the highway. Following initial public and agency input, an alternative ramp configuration to a standard diamond design was developed to minimize impacts to properties in the northeast quadrant of the interchange. The five County T alternatives are listed below (see *Alternative Selection Report*, Appendix B). Impacts associated with the County T alternatives are summarized in Matrix 3, Appendix C (Alternative Concept Evaluation – US 53 at County T).

- Alternative 1: Standard diamond interchange. Alternative 1 would result in impacts to the floodplain area associated with a tributary to Bergen Creek. Alternative 1 would impact wetlands to the north and south of County T, and would require a bridge over the Wild Rivers Trail to maintain access to properties in the southeast quadrant of the interchange. Alternative 1 would also result in three to four residential relocations and one commercial business relocation. Therefore, Alternative 1 was dismissed from further consideration.
- Alternative 2: Standard diamond interchange, realigned County T (Option 1). Realignment of County T under Alternative 2 would minimize impacts to the floodplain north of County T; however, this would result in greater wetland impacts south of County T. Alternative 2 would result in the greatest wetland impacts of the alternatives studied at US 53 and County T. Alternative 2 would require a bridge over the Wild Rivers Trail to maintain access to properties in the southeast quadrant of the interchange, and would require one residential relocation. Therefore, Alternative 2 was dismissed from further consideration.

- Alternative 3: Standard diamond interchange, realigned County T (Option 2). The alignment of County T under Alternative 3 would minimize impacts to the floodplain north of County T, and also minimize wetland impacts south of County T compared to Alternative 2. However, Alternative 3 would result in approximately 8 acres of wetland impacts and would require one residential relocation. A bridge over the Wild Rivers Trail would also be required to maintain east-west connectivity across US 53. Therefore, Alternative 3 was dismissed from further consideration.
- Alternative 4: Folded diamond interchange, realigned County T. Alternative 4 would reduce wetland impacts on the west side of US 53 compared to Alternative 2, but would increase wetland impacts on the east side of US 53. Alternative 4 would result in the greatest right of way impacts of the alternatives studied at US 53 and County T, and could also require one residential relocation if alternative access could not be provided. Therefore, Alternative 4 was dismissed from further consideration.
- Alternative 5: Non-interchange grade separation. County T overpass with right-in, right-out local road access on the west and east sides of US 53 (“jug handle” configuration). Alternative 5 was identified as the preferred alternative for County T. See discussion below.

County T Preferred Alternative

Non-interchange “Jug Handle” configuration (Alternative 5)

The Preferred Alternative County T “jug handle” configuration (Alternative 5) is illustrated in Figure 3, Appendix D. The approximately construction length for the Preferred Alternative is listed below:

- 0.6 miles – County T
- 0.3 miles – Right-in/right-out local access road connections and side roads
- 0.3 miles – Mainline improvements (median closures)
- 1.2 miles – Total**

The “jug handle” alternative is a non-interchange alternative that consists of a County T overpass with right-in, right-out access on the west and east sides of US 53. South Town Hall Road and Red Lake Drive would be used as the connection to US 53 on the east side of the highway. On the west side of US 53, the connection would be provided via a new north-south two-lane roadway between the realigned County T and East Red Lake Drive. The Preferred Alternative changes access by closing the median of the at-grade crossing.

Due to lower volumes on County T, and because the US 53/County T intersection does not currently have crash concerns, an interchange was determined not necessary at this time. The interchange alternatives would also result in greater right of way and wetland impacts. These impacts were determined to be greater than any advantages gained with the interchange alternatives. Therefore, the “jug handle” alternative was selected as the Preferred Alternative for County T at US 53. This configuration would improve safety by removing conflicting turning movements without impeding mobility on US 53. This alternative also has the smallest footprint and results in the fewest impacts (e.g., right of way, wetlands) of all the alternatives reviewed. The “jug handle” design at US 53 and County T would not preclude future staging of an upgrade to a full interchange over time.

Reconstruction of County T with the proposed grade separation is anticipated to result in approximately 1.3 acres of fill impacts to two wetland basins located south the proposed County T alignment (see Factor Sheet C-1 – Wetlands Evaluation). Shifting the County T alignment to the north of the proposed alignment was considered to avoid these wetland basins; however, this would create additional impacts to residential properties within the study area. Shifting County T to the north of the proposed alignment would result in the acquisition of two residences along the east side of US 53 and would impact town of Wascott property near the south end of Town Hall Road. Therefore, the proposed County T alignment was identified to balance and minimize potential impacts (e.g., wetlands, right of way) within the study area.

3. Description of Proposed Action (attach project location map and other appropriate graphics):

The intent of the Proposed Action is to identify existing and potential crash and/or mobility issues and develop alternatives that would maintain or enhance the existing expressway safety and mobility. Officially mapping these proposed enhancements ensures that the preferred alternatives remain viable projects in the future.

Official mapping under §84.295(10) provides the Department the authority to purchase officially mapped lands as right-of-way; therefore, the completion of this environmental analysis will enhance the validity of the preferred alternative selections and serve as a link between the planning and preservation process and final project design.

The project area is located in Washburn and Douglas counties, as illustrated in Figure 1, Appendix D. The total length of the US 53 project corridor is approximately 14.4 miles from County F to County T. The Proposed Action would consist of grade-separation improvements at three locations, as shown in Figure 2, Appendix D:

1. Non-interchange “jug handle” configuration at US 53 and County F (Town of Brooklyn)
2. Folded diamond interchange at US 53 and WIS 77 (Village of Minong)
3. Non-interchange “jug handle” configuration at US 53 and County T (Town of Wascott)

The proposed action would also include officially mapping portions of the existing local roadway system would be altered to ensure local road system continuity and access to US 53. The Proposed Action does not include immediate programming of construction funds but is designed in such a way to allow incremental construction and funding over time. The long-term vision and management strategy used by this Proposed Action allows incremental improvements and funding strategies. The direct impacts presented in this EA were examined as if the improvements were being constructed in the near future. The official mapping action does not have direct effects. However, they could have some minor indirect effects, which are discussed in the Pre-Screening Analysis for Indirect and Cumulative Effects Analysis in Appendix I.

The total estimated project cost is approximately \$60.7 million (year 2013 dollars). The total real estate acquisition portion of the estimated project cost is approximately \$1.7 million. Estimated costs and real estate acquisition portions of the estimated project costs for the US 53 grade separations at County F and County T and the US 53/WIS 77 interchange are summarized in Basic Sheet 5 (Alternatives Comparison Matrix).

4. In general terms, briefly discuss the construction and operational energy requirements and conservation potential of the various alternatives under consideration. Indicate whether the savings in operational energy are greater than the energy required to construct the facility:

No Action Alternative

The No Action Alternative would require minimal construction energy for routine maintenance activities. Existing at-grade intersections at County F, WIS 77 and County T would remain under the No Action Alternative. Operational energy requirements are not anticipated to vary substantially compared to existing conditions. However, as traffic volumes increase over time, the potential for cross-traffic conflicts and safety issues is expected to increase.

Preferred Alternative

Current Proposed Project (Official Mapping)

Official mapping of the proposed US 53/County F grade separation, US 53/WIS 77 interchange, and US 53/County T grade separation would not require any energy use for construction or operations.

Future Proposed Project (Future Project Construction)

Future construction of the Preferred Alternative would require the consumption of a large amount of energy. This energy requirement would be greater compared to the No Action Alternative. However, the Preferred Alternative would remove existing at-grade intersections at County F, WIS 77 and County T and improve safety by eliminating the potential for conflicts with through traffic on US 53. Over the design life of the facility, savings in operational energy due to improved safety are anticipated to offset the energy required to construct the Preferred Alternative.

The energy requirements (construction and operational) and conservation potential of build alternatives (see Item 2) are the same. All alternatives considered at US 53 and County F, US 53 and WIS 77 and US 53 and County T and not anticipated to differ from one another.

5. Describe existing land use (attach land use maps, if available): Land use maps are included in Appendix D.

a. Land use of properties that adjoin the project:

County F

This area is located in the Town of Brooklyn, a predominantly rural area with many lakes and a forested landscape. In the immediate project vicinity, existing land use at the intersection of US 53 and County F consists of residential, woodlands and other natural areas. Silver Lake lies to the east of US 53. See the Northwest Regional Planning Commission's map of the general existing land use for the town of Brooklyn in Appendix D.

WIS 77

This area is partially located within the urban district of the Village of Minong, as well as portions of the Town of Minong. In the immediate project vicinity, existing land use at the intersection of US 53 and WIS 77 consists of commercial, residential, agricultural, and woodlands and other natural areas. See the Northwest Regional Planning Commission's map of the general existing land use for the town of Minong in Appendix D.

County T

This area is located in the Town of Wascott, a predominantly rural area with many lakes and a forested landscape. In the immediate project vicinity, existing land use at the intersection of US 53 and County T consists of commercial, residential, agricultural, and woodlands and other natural areas. See the Northwest Regional Planning Commission's map of the general existing land use for the Town of Wascott in Appendix D.

b. Land use surrounding project area:

Land use in the areas surrounding the proposed project consists of forest, agricultural, wetland, open water (lakes, rivers, and wetlands), commercial (e.g. gas stations, bars, restaurants, resorts, and small businesses), and rural residential. Urban and transitional land use exists in the following areas:

- Village of Minong, population 527 (2010 Census), is located immediately east of the proposed project at the intersection of US 53 and WIS 77.
- City of Spooner, population 2,682 (2010 Census), is located approximately 12 miles south of the US 53 and County F intersection.

6. Briefly identify adopted local or regional plans for the project area and zoning regulations. Discuss whether the proposed action is compatible with the plan or zoning:

According to the *Village of Minong Comprehensive Plan* existing (2004) and future (2025) land use projection, the proposed project is generally consistent with future land use projections by the Town of Minong. In the southwest corner of the Village of Minong, a portion of agricultural/open space land use is anticipated to convert to industrial use by 2025. In the western portion of the village, commercial land use is expected to increase in size, extending outward in every direction. Residential land use is expected to grow in the northeastern portion of the village, replacing existing agricultural uses. Land uses in the northern and southern portion of the project area are not anticipated to change during the 20-year time frame. The growth of residential, commercial and industrial land uses along US 53 through the village of Minong is consistent with the Proposed Action. Improvements to US 53 would promote more urban land uses along the project corridor and would, thus, be consistent with growth plans identified by the Town of Brooklyn, Village of Minong, and Town of Wascott.

The proposed action is also compatible with the Washburn and Douglas County comprehensive plans. One of the goals of Washburn County's Preliminary Final Draft Comprehensive Plan (November 2004) is to maintain a safe and efficient county transportation system that meets county needs. Actions to support that goal include working with the Department of Transportation to review safety issues at the intersection of US 53 and WIS 77 and reviewing access management issues. According to the Douglas County 2010 – 2030 Comprehensive Plan, the integration of transportation planning with broader land use planning is not only critical to reducing costs, but also to enhancing the quality, livability, and character of rural and urban communities.

US 53 is part of WisDOT's *Corridors 2020 Plan* and *Connections 2030 Plan*. The *Corridors 2020 Plan* identifies this highway as a "Backbone" route between the Duluth/Superior area on the Minnesota/Wisconsin border and Interstate 94 in Eau Claire, Wisconsin. "Backbone" routes connect major population and economic centers and provide high mobility economic links to national and international markets. The portion of US 53 from Eau Claire to Duluth/Superior is also part of WisDOT's *Connections 2030 Plan*. This plan identifies multimodal corridors throughout the state. These multimodal corridors build upon the backbone system and are critical in serving the travel patterns throughout the state and in supporting the state's economy. The general purpose of backbone and connector routes is to provide safe and efficient travel; the Proposed Action supports these goals and improves on existing conditions.

7. Describe how the project development process complied with Executive Order 12898 on Environmental Justice. If populations of any group covered by EO 12898 are present in the project area, complete Factor Sheet B-4, Environmental Justice:

How was information obtained about the presence of populations covered by EO 12898?	
X Windshield Survey	Official Plan
X US Census Data (see Appendix E)	Survey Questionnaire
Real Estate Company	WisDOT Real Estate
Public Information Meeting	Local Government
Human Resources Agency Identify agency Identify plan, approval authority and date of approval	
X Other (Identify) Village of Minong Comprehensive Plan (July 2004)	

- a. No - Populations covered by EO 12898 are not present in project area.
- b. X Yes - Populations covered by EO 12898 are present. Factor Sheet B-4 must be completed.

8. Indicate whether individuals covered by Title VI of the 1964 Civil Rights Act, the Americans with Disabilities Act or the Age Discrimination Act were identified: Title VI prohibits discrimination on the basis of race, color, or country of origin.

- a. No - Individuals covered by the above laws were not identified.
- b. X Yes - Individuals covered by the above laws were identified.
 - X Civil Rights issues were not identified.
 - Civil Rights issues were identified. Explain:

9. Briefly summarize public involvement methods:

a. Meetings.

Date	Meeting Sponsor (WisDOT, RPC, MPO, etc.)	Type of Meeting (PIM, Public Hearings, etc.)	Location	Approx. # Attendees
Nov. 2007	WisDOT	Public Informational Meeting (PIM)	Minong Village Hall	> 35
April 2008	WisDOT	PIM	Minong Village Hall	> 35
Oct. 2011	WisDOT	PIM	Minong Village Hall	> 50
Mar. 2012	Town of Wascott	Informational	Wascott Town Hall	20

The public involvement effort included public information meetings and local official meetings. Meetings with local officials were held prior to the public meetings. The purpose of the first meeting (November 2007) was to introduce and provide information about the study and to obtain input on transportation and interchange location issues. The second meeting (April 2008) reviewed study progress and introduced geometric alternatives along US 53 at the intersections of County F, WIS 77, and County T. The purpose of the third meeting (October 2011) was to present the Preferred Alternative designs at County F, WIS 77 and County T. Meeting announcements were mailed to property owners adjacent to US 53 at County F, WIS 77 and County T. Press releases were provided to local newspapers prior to public involvement meetings. Maps of the alternatives were on display and attendees had the opportunity to provide written or verbal comments. The fourth meeting was requested by the Town of Wascott. A review of the project, specific to the CTH T intersection, was presented and discussed.

b. Other methods, describe:

A project website was developed by WisDOT (Plans and Projects) to provide the public with a description of the project and information regarding proposed alternatives, project schedule, and opportunities for public involvement. This website is located at <http://www.dot.wisconsin.gov/projects/us53corridor/minong/index.htm>. The US 53 Corridor Preservation, Minong Area project website is part of a website developed by WisDOT to disseminate information regarding the corridor preservation process and long-term vision for the 75-mile US 53 corridor between Rice Lake and Superior.

c. Identify groups that participated in the public involvement process. Include any organizations and special interest groups:

Property owners attended the public meetings.

d. Indicate plans for additional public involvement, if applicable:

A public hearing will be held in conjunction with the official mapping process.

10. Briefly summarize the results of public involvement:

a. Describe the issues, if any, identified by individuals or groups during the public involvement process:

The public commented on the following issues/concerns: existing safety concerns, potential access changes, property impacts, local circulation, and wetland impacts. Public comments regarding alternatives studied at County F, WIS 77, and County T are summarized in the *Alternative Selection Report* in Appendix B.

b. Briefly describe how the issues identified above were addressed:

At US 53 and County F and US 53 and County T, non-interchange alternatives (“jug handle” design) were developed, evaluated, and identified as the Preferred Alternative for the proposed action partially due to public input. This design minimizes impacts to adjacent properties and wetlands. With the “jug handle” grade separation design, local access points along US 53 near County F and County T would not need to be closed, maintaining existing local circulation. The Preferred Alternative at US 53 and WIS 77 minimizes impacts to adjacent properties, particularly the commercial businesses in the northwest quadrant of the interchange, and includes an overpass at Shell Creek Road to provide for local circulation and emergency services accessibility in the Village of Minong.

11. Local/regional government coordination:

a. Identify units of government contacted and provide the date coordination was initiated:

Unit of Government	Coordination	Coordination Initiation Date	Coordination Completion Date	Comments
MPO, RPC, City, County, Village, Town, etc.	Correspondence Attached Y/N			
Northwest Region Planning Commission	N	11/8/2007	ongoing	N/A
Washburn County	N	11/8/2007	ongoing	N/A
Douglas County	N	11/8/2007	ongoing	N/A
Town of Minong	N	11/8/2007	ongoing	See below.
Village of Minong	N	11/8/2007	ongoing	See below.
Town of Brooklyn	N	11/8/2007	ongoing	See below.
Town of Wascott	N	11/8/2007	ongoing	See below.

b. Describe the issues, if any, identified by units of government during the public involvement process:

Local officials and county agencies (Washburn County and Douglas County) were provided the opportunity to submit comments and were invited to all local official and public involvement meetings. Local officials comments regarding alternatives studied at County F, WIS 77, and County T are summarized in the *Alternative Selection Report* in Appendix B. See sample local official and public information meeting invitation and distribution list in Appendix F.

Issues identified by local units of government are summarized below.

- Potential impacts to the Brooklyn Town Hall, Silver Lake, and Shell Creek.
- The service area for Village of Minong emergency services extends to the west of US 53. Local officials identified the need for an alternative crossing of US 53 in the event that the proposed WIS 77 interchange was not accessible.
- Accessibility to Town of Wascott public facilities east of US 53 at County T.

c. Briefly describe how the issues identified above were addressed:

The proposed County F grade separation at US 53 is located to the south of the Brooklyn Town Hall. Approximately 300 feet of Birchwood Drive would be reconstructed east of Brooklyn Town Hall to intersect with the proposed local road connection to US 53, and the existing access to Brooklyn Town Hall from Birchwood Drive would be maintained. County F would be reconstructed along the south shore of Silver Lake to accommodate the proposed grade separation at US 53. Storm water management measures, in accordance with Trans 401 requirements, would be identified during design to minimize runoff and water quality impacts to Silver Lake and Shell Creek. (See Factor Sheet D-5, Stormwater Evaluation).

The preferred alternative includes an overpass at Shell Creek Road and Business 53 in the village of Minong. This grade separated crossing provides for additional local accessibility and mobility, and also allows for emergency service providers to cross US 53 and service properties to the west of US 53. (See Figure 2A and Figure 2B, Appendix D.)

The proposed County T grade separation at US 53 is located to the southwest of Town of Wascott public facilities, and would maintain accessibility to US 53. The existing Red Lake Drive intersection would provide right-in/right-out access to northbound US 53 to the north of Town of Wascott public facilities. A local road connection along the west side of US 53 would provide right-in/right-out access to southbound US 53 from County T. (See Figure 3, Appendix D.)

d. Indicate any unresolved issues or ongoing discussion:

None.

**Basic Sheet 3
Coordination**

Results of agency coordination are summarized below. Agency coordination was initiated in March 2008. A sample agency notification letter and distribution list is included in Appendix F. Notification of all public information meetings was also provided to agencies. See local officials and agency distribution list in Appendix F.

INTERNAL WisDOT	Coordination Required? Y = Yes N = No	Correspondence Attached? Y = Yes N = No	Comments Explain or give results. If no correspondence is attached to this document, indicate when coordination with the agency was initiated and, if available, when coordination was completed. If coordination is not required, state why.
Bureau of Aeronautics	No	Y	Coordination is not required. Project is not located within 2 miles (3.22 km) of a public or military use airport nor would the project change the horizontal or vertical alignment of a transportation facility located within 4 miles (6.44 km) of a public use or military airport. See Appendix F for agency correspondence.
	Yes		
Bureau of Rails & Harbors	No	N	Coordination is not required because no railways or harbors are in or planned in the project area.
	Yes		
Regional Real Estate Section	No	N	Per WisDOT's Facilities Development Manual 3-10-20, inclusion of the assessment of potential relocations on the <i>Community or Residential Impact Evaluation Factor Sheet</i> constitutes the "Conceptual Stage Relocation Plan."
	Yes		
STATE AGENCY	Coordination Required? Y = Yes N = No	Correspondence Attached? Y = Yes N = No	
Agriculture (DATCP)	Y	Y	DATCP determined that an AIS will not be prepared for this project at this time; DATCP requests to be re-notified when WisDOT moves forward with farmland acquisition. See Appendix F for DATCP correspondence.
Natural Resources (WDNR)	Y	Y	The WDNR participated in a field review of the project areas on July 1, 2008. After the field review, the WDNR provided correspondence concerning potential impacts to water resources, wetlands, and threatened/special concern species. See Appendix F for WDNR correspondence.
State Historic Preservation Office (SHPO)	Y	Y	Coordination with the SHPO has been conducted as part of the Section 106 process. The Section 106 documentation was submitted for review. See Appendix G for the completed Section 106 Form.
Others:	N/A	N/A	Not applicable
FEDERAL AGENCY	Coordination Required? Y = Yes N = No	Correspondence Attached? Y = Yes N = No	
Advisory Council on Hist. Pres. (ACHP)	N	N	Not applicable

**Basic Sheet 3
Coordination (continued)**

FEDERAL AGENCY	Coordination Required? Y = Yes N = No	Correspondence Attached? Y = Yes N = No	
Corps of Engineers (COE)	Y	N	<p>Any early coordination letter dated March 27, 2008 was submitted to COE staff. No response was received.</p> <p>A COE permit would be required for work in wetlands. Coordination will be conducted with the COE during the design and construction stage regarding potential wetland impacts and mitigation based on rules and regulations in place at that time. A permitting application will be completed closer to the time of construction of proposed improvements.</p>
Environmental Protection Agency (EPA)	Y	Y	An early coordination letter dated March 27, 2008 was sent to the EPA. Additional coordination letters were submitted to EPA in October 2011 and February 2012. See EPA correspondence in Appendix F.
National Park Service (NPS)	N	N	Not applicable
Nat. Resource Cons. Service (NRCS)	Y	Y	AD-1006 forms were sent to NRCS in Washburn and Douglas counties. The response from the NRCS Northwest Area Office indicated that provisions of the Farmland Protection Policy Act do not apply and that no further action is needed. See Appendix F for NRCS correspondence.
US Coast Guard (USCG)	N	N	Not applicable
Fish & Wildlife Serv. (FWS)	Y	Y	<p>As requested by the FWS, federally listed threatened and endangered species and critical habitat in Washburn and Douglas counties was identified from a search of their technical assistance website.</p> <p>A follow-up coordination letter dated February 2010 was sent to the FWS. No response was received.</p> <p>Future coordination would occur closer to design/implementation to determine the presence of these species and habitats, the effect of the proposed action, and appropriate actions to be taken.</p> <p>See Appendix F for FWS correspondence.</p>
Other(Identify)	N/A	N/A	Not applicable
AMERICAN INDIAN TRIBES	Y	Y	Refer to Factor Sheet B-7 See Appendix G (Section 106 Form) and Appendix H for American Indian Tribes correspondence.

**Basic Sheet 4
Environmental Factors Matrix**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p>					
A. ECONOMIC FACTORS					
A-1 General Economics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed action would provide safe and efficient access to and from US 53 for the Town of Brooklyn, Village of Minong, Town of Minong and Town of Wascott.</p> <p>The proposed action would require some right of way acquisition to accommodate the grade separations at County F and County T, and the interchange at WIS 77 and would result in temporary disruptions during project construction. Increased travel time for local residents due to the closure of existing access points at US 53 would be offset by the safety benefits of the proposed grade-separated crossings of US 53.</p>
A-2 Business	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed action would provide safe and efficient access to businesses at County F, WIS 77 and County T.</p> <p>The greatest concentration of businesses within the project area is at WIS 77 and Business 53 in the Village of Minong. Access to US 53 to/from Business 53 would be closed and replaced with the proposed WIS 77 interchange, resulting in some increase in travel time depending upon the direction of travel.</p> <p>The proposed action would require one business relocation US 53 and WIS 77 in the Village of Minong.</p>
A-3 Agriculture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed action would require acquisition of agricultural land from 2 farm operations (total of approximately 6.1 acres of crop land/pasture). DATCP has indicated that an Agricultural Impact Statement is not needed at this time.</p>
B. SOCIAL/CULTURAL FACTORS					
B-1 Community or Residential	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The proposed action would result in access changes to US 53. One residential relocation is anticipated at County F and one business relocation is anticipated at WIS 77.</p> <p>Safety improvements are a positive benefit of the proposed action. The proposed action would also provide for safe and efficient access across US 53 for Village of Minong emergency service providers.</p>
B-2 Indirect Effects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Refer to the <i>Indirect and Cumulative Effects Prescreening Analysis</i> in Appendix I.</p>

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
					Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.
B-3 Cumulative Effects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Refer to the <i>Indirect and Cumulative Effects Prescreening Analysis</i> in Appendix I.
B-4 Environmental Justice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Populations covered by Executive Order 12898 are not present within the project limits at County F and County T. See 2010 Census Data in Appendix E.</p> <p>A low income, elderly population may be present in the Village of Minong. Summary tables, along with 2010 US Census Data and 2007-2011 American Community Survey data are provided in Appendix E. See Environmental Justice Factor Sheet.</p> <p>The proposed action is not anticipated to have an adverse or disproportionate impact on low-income or minority populations.</p>
B-5 Historic Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>One historic site was identified at US 53 and County F in the Town of Brooklyn. The Lampson School/Brooklyn Township Hall was determined eligible for listing in the National Register of Historic Places under Criterion A. A conditional no adverse effect (CNAE) determination was approved by SHPO.</p> <p>The Section 106 form was signed on May 11, 2012. See Section 106 Form in Appendix G.</p>
B-6 Archaeological Sites	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>A record search identified three sites within the project area, all of which were previously disturbed by road construction. Shovel testing was conducted during a Phase I archaeological survey in November 2010; no new archaeological sites were identified.</p> <p>The Section 106 form was signed on May 11, 2012. See Section 106 Form in Appendix G.</p>
B-7 Tribal Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No tribal issues have been identified. Three tribes responded to project coordination requests: Lac du Flambeau Band of Lake Superior Chippewa Indians, Stockbridge-Munsee Community Band of Mohican Indians, and the Prairie Band Potawatomi Nation. The Phase I archaeological report will be sent to the Lac du Flambeau Band of Lake Superior Chippewa Indians. See Tribal Issues Factor Sheet.
B-8 Section 4(f) and 6(f) or Other Unique Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Lampson School/Brooklyn Town Hall is located near the northeast quadrant of the County F grade separation at US 53. The Lampson School/Brooklyn Town Hall was determined eligible for listing on the National Register of Historic Places. The County F grade separation was designed to avoid a Section 4(f) use of the Lampson School/Brooklyn Town Hall, therefore, there is no Section 4(f) involvement associated with this property.

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
					<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p>
B-8 Section 4(f) and 6(f) or Other Unique Areas (continued)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The Wild Rivers State Trail is located east of US 53. The trail would not be affected by the proposed action. The County T alignment and grade separation at US 53 terminates west of the trail at Town Hall Road.</p> <p>No other Section 4(f), Section 6(f), or other unique areas are present in the project area.</p>
B-9 Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Proposed Action would not affect the visual character of the landscape as a whole. The existing rural character at County F and County T and more urban development at WIS would be retained as US 53 would remain a four-lane, rural expressway with the Proposed Action. Improvements would occur within or adjacent to the existing highway corridor. Grade separations at County F and County, and the proposed interchange at US 53 and WIS 77 would be visible as travelers along US 53 approach these locations. Viewsheds approaching these grade separations and associated structures are anticipated to be similar in nature to other grade separations currently in place along the US 53 corridor. See Aesthetics Factor Sheet.</p>
C. NATURAL SYSTEM FACTORS					
C-1 Wetlands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Approximately 2.7 acres of wetland could be affected as a result of the proposed action. Wetlands will be delineated closer to design/construction to determine the exact amount and location of impacts. On-site mitigation does not appear practical because drained hydric soils are not abundant in the project area. Agency coordination will be conducted concerning appropriate wetland mitigation at the time of design and construction in accordance with rules and regulations in place at that time.</p>
C-2 Rivers, Streams and Floodplains	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The footprint of Shell Creek Road where it currently crosses the creek on the west side of US 53 would be expanded and the existing single culvert would be replaced. Construction could include excavation and some fill, and changes to grade and drainage. WisDOT is committed to maintaining flow conditions that are the same or better than the current conditions. Timing restrictions may be necessary to avoid in-stream related construction during trout spawning and nursery period.</p> <p>The proposed construction would cross an existing mapped floodplain along this portion of Shell Creek. If Shell Creek Road is raised or widened at Shell Creek, a hydraulic and hydrologic (H & H) study may need to be conducted to ensure that the culvert would be properly sized and would not increase backwater flood elevations. Details of the design would be developed after further consultation with WDNR.</p>

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
					<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p>
C-3 Lakes or Other Open Water	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Construction limits of County F extend east of US 53 adjacent to Silver Lake. Impacts to water quality could occur during construction as a result of erosion from exposed grades and slopes. After permanent vegetation is established, the main impact to water quality would come from stormwater runoff from additional impervious surfaces. A portion of the existing vegetative buffer along the north side of County F at Silver Lake could be removed or diminished. WisDOT will coordinate with WDNR regarding Trans 401 stormwater standards in place at the time of design to minimize impacts to Silver Lake.</p> <p>There is a small floodplain where County F currently runs adjacent to the southern portion of Silver Lake. As required under Wisconsin's Floodplain Management Program, if the road alignment would be raised or any fill would need to be brought into this area, it may be necessary to conduct a study to determine if these activities would change the flood elevations associated with the lake.</p> <p>See Lakes and Other Open Water Factor Sheet.</p>
C-4 Groundwater, Wells, and Springs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Preliminary design construction limits of the proposed US 53 interchange at WIS 77 are within the 1,000-foot wellhead protection area associated with the Village of Minong municipal wells. Best management practices for stormwater management will be identified during design, based on Trans 401 requirements and other applicable rules and regulations in place at that time.</p> <p>A well inventory survey will be completed during design and prior to construction of the project. Any wells discovered during construction will be sealed in accordance with Wisconsin Administrative Code NR 811 and NR 812, or other applicable regulations in place at that time.</p> <p>An unnamed spring is located of the US 53/Shell Creek Road intersection. This spring feeds Shell Creek, which crosses US 53 north of Minong and Shell Creek Road west of US 53, north of Minong. The proposed Shell Creek Road overpass is not anticipated to substantially increase impervious surface compared to existing conditions. Stormwater best management practices (BMPs) will be identified during design, based on Trans 401 requirements and other applicable rules and regulations in place at that time.</p> <p>See Groundwater, Wells, and Springs Factor Sheet.</p>

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
					<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p>
C-5 Upland Wildlife and Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Proposed Action would convert woodland habitat (mixed oak/pine woodlands and pine plantation) adjacent to existing right of way to transportation uses. See Upland Habitat Factor Sheet.
C-6 Coastal Zones	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Douglas County is located within Wisconsin's Coastal Management Program (WCMP) coastal zone. The Proposed Action is located near the southern boundary of Douglas County, outside of the watershed boundary for Lake Superior and the Wisconsin Coastal and Estuarine Land Conservation Plan area (Wisconsin Department of Administration. Wisconsin Coastal Management Program. <i>Wisconsin Coastal and Estuarine Land Conservation Plan</i> . October 2011.)
C-7 Threatened and Endangered Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Several federal listed threatened and endangered species are listed within Washburn and Douglas counties. WDNR has also identified threatened species, endangered species or species of special concern known to occur or that have the potential to be present within the project area. These species and their designation are identified in the Threatened and Endangered Species Evaluation Factor Sheet.</p> <p>Consultation with the USFWS and WDNR would occur closer to design/construction to determine the presence of endangered or threatened species and/or critical habitat in the area of influence of the proposed action, and to determine if any protected species could be affected by the project. Avoidance and minimization measures for any protected species potentially affected by the project will be identified in consultation with USFWS and WDNR. Appropriate mitigation measures recommended by USFWS and WDNR would also be implemented. If necessary, formal Section 7 consultation would be initiated.</p>
D. PHYSICAL FACTORS					
D-1 Air Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p><u>Carbon Monoxide</u></p> <p>NR 411 was repealed by the Wisconsin Legislature. Indirect source permits are no longer required as of March 22, 2012.</p>

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				Comments
	Adverse	Benefit	None Identified	Factor Sheet Attached	
					<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p>
D-1 Air Quality (continued)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p><u>Mobile Source Air Toxics (MSATs)</u></p> <p>The purpose of the Proposed Action is to identify long-term solutions for segments of the US 53 project corridor that are currently experiencing or expected to experience safety concerns. Corridor preservation would be pursued to help protect and preserve right of way for future grade separations at County F, WIS 77, and County T. This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the No Build Alternative.</p> <p>Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 100 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.</p>
D-2 Construction Stage Sound Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
D-3 Traffic Noise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A noise analysis was performed. No impacts are anticipated. See Traffic Noise Factor Sheet.
D-4 Hazardous Substances or Contamination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	The Phase I Hazardous Materials Assessment identified 15 sites within a 1.5-mile radius of US 53 at County F, WIS 77 and County T. See Hazardous Substances or Contamination Evaluation Factor Sheet.
D-5 Stormwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A Stormwater Management Plan would be developed with coordination from WDNR to reduce or minimize runoff effects to surrounding waters of the State from construction of the proposed action. Construction site erosion and sediment control would be part of the project's design and construction as set forth in Trans 401 Wis. Adm. Code and the WisDOT/WDNR Cooperative Agreement in place at the time of design. The final determination of the stormwater measures to be implemented will be made closer to design and construction.

**Basic Sheet 4
Environmental Factors Matrix (continued)**

FACTORS	EFFECTS				
	Adverse	Benefit	None Identified	Factor Sheet Attached	<p>Note: Comments should be of a summary nature and should not extensively duplicate information contained in an attached factor sheet. If an "adverse" effect is permanent, a factor sheet must be attached. If an "adverse" effect is temporary, it must be explained on this sheet under "comments". If "None Identified" is indicated, explain why.</p> <p align="center">Comments</p>
D-6 Erosion Control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Standard WisDOT erosion control methods would be used during construction. Temporary and permanent erosion control measures may include, but are not limited to, minimizing the amount of land exposed at one time, temporary seed, mulch, silt fencing, and erosion mats. In addition, coordination with the WDNR would occur to ensure adequate vegetative cover is maintained.</p> <p>Construction site erosion and sediment control would be part of the project's design and construction. An Erosion Control Implementation Plan (ECIP) would be prepared by the contractor and approved by WisDOT prior to construction.</p>
E. OTHER FACTORS					
E-1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Not applicable.
E-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Not applicable.

**Basic Sheet 5
Alternatives Comparison Matrix (US 53 at County F)**

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at US 53 and County F are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and in the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and County F are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 600' Intersection Spacing)	Alt. 2 (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F under US 53)	Sub-Alt. 2A (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F over US 53)	Alt. 3 (Folded Diamond with 1,400' Intersection Spacing, Loop in SE Quadrant)	Preferred Alternative ⁽¹⁾ (Jug Handle Configuration)
Project Length:	Miles	0	3.4	3.3	3.3	3.3	1.8
Preliminary Cost Estimate ⁽²⁾							
Construction	Million \$	0	10 – 15	10 – 15	20 – 25	10 – 15	17.9
Real Estate	Million \$	0	1.1	2.1	2.1	1.5	0.5
Total	Million \$	0	11.1 – 16.1	12.1 – 17.1	22.1 – 27.1	11.5 – 16.5	18.4
Land Conversions							
Wetland Area Converted to ROW ⁽³⁾	Acres	0	1.3	0.7	0.7	0.8	0.2
Upland Habitat Area Converted to ROW ⁽⁴⁾	Acres	0	22.6	27.0	26.4	17.9	16.8
Other Area Converted to ROW ⁽⁵⁾	Acres	0	4.6	17.6	17.1	25.4	3.9
Total Area Converted to ROW	Acres	0	28.5	45.3	44.2	44.1	20.9
Real Estate							
Number of Farms Affected	Number	0	1	2	2	2	1
Total Area Required From Farm Operations	Acres	0	2.5	6.9	6.9	6.1	3.3
AIS Required	Yes/No	No	No	No	No	No	No
Farmland Rating ⁽⁶⁾	Score	0	--	--	--	--	80
Total Buildings Required	Number	0	5	10	10	6	3
Housing Units Required	Number	0	3	5	5	4	1

(1) Note: The current proposed project (official mapping) would not create the impacts described below, but future project construction would cause these impacts.

(2) Planning-level construction and real estate cost estimates for alternatives dismissed based on concept design evaluation (year 2009 dollars) (see Appendix C). Preliminary cost estimates for the Preferred Alternative in year 2013 dollars.

(3) Wetland area outside of existing right of way.

(4) Total acres of upland forest and pine plantation habitat areas (see Factor Sheet C-5, Upland Wildlife and Habitat Evaluation).

(5) Number of acres of developed, previously disturbed land, crop land/pasture and/or existing right of way.

(6) Score from Part VI of Form AD-1006. Prepared for Preferred Alternative only. See also NRCS correspondence in Appendix F.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at County F continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at US 53 and County F are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and in the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and County F are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 600' Intersection Spacing)	Alt. 2 (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F under US 53)	Sub-Alt. 2A (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F over US 53)	Alt. 3 (Folded Diamond with 1,400' Intersection Spacing, Loop in SE Quadrant)	Preferred Alternative (Jug Handle Configuration)
Real Estate							
Commercial Units Required	Number	0	0	1	1	0	0
Other Buildings or Structures Required (residential – garage/shed)	Number (Type)	0	2 garages	4 garages	4 garages	2 garages	2 garages
Environmental Issues							
Indirect Effects	Yes/No	No	No	No	No	No	No
Cumulative Effects	Yes/No	No	No	No	No	No	No
Environmental Justice Populations	Yes/No	No	No	No	No	No	No
Historic Properties ⁽⁷⁾	Number	0	1	1	1	1	1
Archeological Sites ⁽⁸⁾	Number	0	1	1	1	1	1
106 MOA Required	Yes/No	No	Yes ⁽⁹⁾	No	Yes ⁽⁹⁾	Yes ⁽⁹⁾	No
4(f) Evaluation Required	Yes/No	No	Yes ⁽⁹⁾	No	Yes ⁽⁹⁾	Yes ⁽⁹⁾	No
Flood Plain	Yes/No	No	Yes	Yes	Yes	Yes	Yes
Total Wetlands Filled ⁽¹⁰⁾	Acres	0	1.7	1.1	1.1	1.2	0.6
Stream Crossings	Number	0	0	0	0	0	0
Endangered Species ⁽¹¹⁾	Yes/No	No	Yes	Yes	Yes	Yes	Yes
Air Quality Permit Required	Yes/No	No	No	No	No	No	No

(7) Total number of properties listed or potentially eligible for the National Register of Historic Places (NRHP) within the project area at County F.

(8) Previously identified archaeological sites within the project area.

(9) Alternative would impact Lampson Schoolhouse/Brooklyn Town Hall (determined eligible for NRHP). Assumes 106 MOA and Section 4(f) evaluation would be required.

(10) Total wetlands filled (acres) within and outside of existing right of way.

(11) WDNR has identified protected species that have the potential to be located within the project area. See Threatened and Endangered Species Evaluation Factor Sheet.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at County F continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at US 53 and County F are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and in the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and County F are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 600' Intersection Spacing)	Alt. 2 (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F under US 53)	Sub-Alt. 2A (Folded Diamond with 1,300' Intersection Spacing, Loop in NW and SE Quadrant, County F over US 53)	Alt. 3 (Folded Diamond with 1,400' Intersection Spacing, Loop in SE Quadrant)	Preferred Alternative (Jug Handle Configuration)
Environmental Issues							
Design Year Noise Sensitive Receptors ⁽¹²⁾							
No Impact	Number	9	--	--	--	--	9
Impacted	Number	0	--	--	--	--	0
Contaminated Sites identified - Phase I Hazardous Material Assessment ⁽¹³⁾	Number	0	0	0	0	0	0

(12) Total number of residences, commercial, or industrial establishments represented by modeled receptor locations at County F. See Traffic Noise Evaluation Factor Sheet.

(13) One contaminated site was identified within a 1.5-mile radius of US 53 at County F. Site is not located within close proximity to the US 53/County F intersection (located north of Palmer Drive). See Hazardous Substances or Contamination Evaluation Factor Sheet.

Basic Sheet 5
Alternatives Comparison Matrix (US 53 at WIS 77)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at WIS 77 are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and WIS 77 are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS						
		No Action	Alt. 1 (Standard Diamond with 800' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Spacing, WIS 77 realigned to south)	Alt. 3 (Split Diamond)	Alt. 4 (Tight Diamond with 400' Spacing)	Alt. 6 (Single Point Interchange)	Preferred Alternative (Folded Diamond, Loop in SW, 900' Intersection Spacing) ⁽¹⁾
Project Length:	Miles	0	2.4	5.3	4.0	2.3	2.8	5.6
Preliminary Cost Estimate⁽²⁾								
Construction	Million \$	0	6 – 10	10 – 15	12 – 17	16 – 21	18 – 23	30.1
Real Estate	Million \$	0	1.7	0.9	1.0	0.8	0.8	1.1
Total	Million \$	0	7.7 – 11.7	10.9 – 15.9	13.0 – 17.0	16.8 – 21.8	18.8 – 23.8	31.2
Land Conversions								
Wetland Area Converted to ROW ⁽³⁾	Acres	0	1.6	2.9	3.0	1.5	1.5	0
Upland Habitat Area Converted to ROW ⁽⁴⁾	Acres	0	4.3	14.0	20.0	4.3	5.5	14.0
Other Area Converted to ROW ⁽⁵⁾	Acres	0	21.5	41.6	21.4	16.5	16.3	23.7
Total Area Converted to ROW	Acres	0	27.4	58.5	44.4	22.3	23.3	37.7
Real Estate								
Number of Farms Affected	Number	0	1	2	1	2	2	1
Total Area Required From Farm Operations	Acres	0	2.1	27.6	5.1	2.2	2.1	2.8
AIS Required	Yes/No	No	No	No	No	No	No	No
Farmland Rating ⁽⁶⁾	Score	0	--	--	--	--	--	80
Total Buildings Required	Number	0	7	1	4	3	3	10

(1) Note: The current proposed project (official mapping) would not create the impacts described below, but future project construction would cause these impacts.

(2) Planning-level construction and real estate cost estimates for alternatives dismissed based on concept design evaluation (year 2009 dollars) (see Appendix C). Preliminary cost estimates for the Preferred Alternative in year 2013 dollars.

(3) Wetland area outside of existing right of way.

(4) Total acres of upland forest and pine plantation habitat areas (see Factor Sheet C-5, Upland Wildlife and Habitat Evaluation).

(5) Number of acres of developed, previously disturbed land, crop land/pasture and/or existing right of way.

(6) Score from Part VI of Form AD-1006. See also NRCS correspondence in Appendix F.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at WIS 77 continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at WIS 77 are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix Below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and WIS 77 are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS						
		No Action	Alt. 1 (Standard Diamond with 800' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Spacing, WIS 77 realigned to south)	Alt. 3 (Split Diamond)	Alt. 4 (Tight Diamond with 400' Spacing)	Alt. 6 (Single Point Interchange)	Preferred Alternative (Folded Diamond, Loop in SW, 900' Intersection Spacing)
Real Estate								
Housing Units Required	Number	0	1	0	1	0	0	0
Commercial Units Required	Number	0	4	1	1	2	2	3
Other Buildings or Structures Required (residential – garage/shed)	Number (Type)	0	2 garages	0	2 garages	1 garage	1 garage	7 6 garages 1 utility building
Environmental Issues								
Indirect Effects	Yes/No	No	No	No	No	No	No	No
Cumulative Effects	Yes/No	No	No	No	No	No	No	No
Environmental Justice Populations	Yes/No	No	Yes	Yes	Yes	Yes	Yes	Yes
Historic Properties ⁽⁷⁾	Number	0	0	0	0	0	0	0
Archeological Sites ⁽⁸⁾	Number	0	0	0	3	0	0	4
106 MOA Required	Yes/No	No	No	No	No	No	No	No
4(f) Evaluation Required	Yes/No	No	No	No	No	No	No	No
Flood Plain	Yes/No	No	No	No	Yes	No	No	Yes
Total Wetlands Filled ⁽⁹⁾	Acres	0	1.9	3.1	12.7	1.8	1.8	0.8
Stream Crossings	Number	0	0	0	1	0	1	1
Endangered Species ⁽¹⁰⁾	Yes/No	No	Yes	Yes	Yes	Yes	Yes	Yes

(7) Total number of listed or potentially eligible for the National Register of Historic Places (NRHP) within the project area at WIS 77.

(8) Previously identified archaeological sites within the project area.

(9) Total wetlands filled (acres) within and outside of existing right of way.

(10) WDNR has identified protected species that have the potential to be located within the project area. See Threatened and Endangered Species Evaluation Factor Sheet.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at WIS 77 continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at WIS 77 are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternative at US 53 and WIS 77 are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS						
		No Action	Alt. 1 (Standard Diamond with 800' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Spacing, WIS 77 realigned to south)	Alt. 3 (Split Diamond)	Alt. 4 (Tight Diamond with 400' Spacing)	Alt. 6 (Single Point Interchange)	Preferred Alternative (Folded Diamond, Loop in SW, 900' Intersection Spacing) ⁽¹⁾
Environmental Issues								
Air Quality Permit Required	Yes/No	No	No	No	No	No	No	No
Design Year Noise Sensitive Receptors ⁽¹¹⁾								
No Impact	Number	29	--	--	--	--	--	29
Impacted	Number	0	--	--	--	--	--	0
Contaminated Sites identified - Phase I Hazardous Material Assessment ⁽¹²⁾	Number	0	4	1	5	4	5	5

(11) Total number of residences, commercial, or industrial establishments represented by modeled receptor locations at WIS 77. See Traffic Noise Evaluation Factor Sheet.

(12) Eleven contaminated sites were identified within a 1.5-mile radius of US 53 at WIS 77. Most of these sites are located in close proximity to the Business 53/WIS 77 intersection, east of US 53 at WIS 77. See Hazardous Substances or Contamination Evaluation Factor Sheet.

Basic Sheet 5
Alternatives Comparison Matrix (US 53 at County T)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at County T are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternatives at US 53 and County T are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 900' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 1)	Alt. 3 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 2)	Alt. 4 (Folded Diamond, County T Realigned, Option 2)	Preferred Alternative ⁽¹⁾ (Jug Handle Configuration)
Project Length:	Miles	0	1.9	2.4	2.3	2.3	1.2
Preliminary Cost Estimate ⁽²⁾							
Construction (2013)	Million \$	0	5 – 10	6 – 12	5 – 10	5 – 10	10.9
Real Estate (2013)	Million \$	0	1.5	0.8	0.7	0.6	0.1
Total	Million \$	0	6.5 – 11.5	6.8 – 12.8	5.7 – 10.7	5.6 – 10.6	11.0
Land Conversions							
Wetland Area Converted to ROW ⁽³⁾	Acres	0	3.4	7.0	3.6	5.5	1.3
Upland Habitat Area Converted to ROW ⁽⁴⁾	Acres	0	7.0	10.0	11.0	18.5	7.2
Other Area Converted to ROW ⁽⁵⁾	Acres	0	6.2	4.3	3.0	3.0	1.5
Total Area Converted to ROW	Acres	0	16.6	21.3	17.6	27.0	10.0
Real Estate							
Number of Farms Affected	Number	0	0	0	0	0	0
Total Area Required From Farm Operations	Acres	0	0	0	0	0	0
AIS Required	Yes/No	No	No	No	No	No	No
Farmland Rating ⁽⁶⁾	Score	0	--	--	--	--	50
Total Buildings Required	Number	0	8	4	4	2	0
Housing Units Required	Number	0	4	2	2	1	0

(1) Note: The current proposed project (official mapping) would not create the impacts described below, but future project construction would cause these impacts.

(2) Planning-level construction and real estate cost estimates for alternatives dismissed based on concept design evaluation (year 2009 dollars) (see Appendix C). Preliminary cost estimates for the Preferred Alternative in year 2013 dollars.

(3) Wetland area outside of existing right of way.

(4) Total acres of upland forest and pine plantation habitat areas (see Factor Sheet C-5, Upland Wildlife and Habitat Evaluation).

(5) Number of acres of developed, previously disturbed land, crop land/pasture and/or existing right of way.

(6) Score from Part VI of Form AD-1006. See also NRCS correspondence in Appendix F.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at County T continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at County T are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternatives at US 53 and County T are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 900' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 1)	Alt. 3 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 2)	Alt. 4 (Folded Diamond, County T Realigned, Option 2)	Preferred Alternative ⁽¹⁾ (Jug Handle Configuration)
Real Estate							
Commercial Units Required	Number	0	1	0	0	0	0
Other Buildings or Structures Required (residential – garage/shed)	Number (Type)	0	3 garages	2 garages	2 garages	1 garage	0
Environmental Issues							
Indirect Effects	Yes/No	No	No	No	No	No	No
Cumulative Effects	Yes/No	No	No	No	No	No	No
Environmental Justice Populations	Yes/No	No	No	No	No	No	No
Historic Properties ⁽⁷⁾	Number	0	0	0	0	0	0
Archeological Sites ⁽⁸⁾	Number	0	2	2	2	2	2
106 MOA Required	Yes/No	No	No	No	No	No	No
4(f) Evaluation Required	Yes/No	No	No ⁽⁹⁾	No ⁽⁹⁾	No ⁽⁹⁾	No	No
Flood Plain	Yes/No	No	Yes	Yes	Yes	Yes	No
Total Wetlands Filled ⁽¹⁰⁾	Acres	0	10.5	13.9	8.0	12.5	1.3
Stream Crossings	Number	0	1	0	0	1	0
Endangered Species ⁽¹¹⁾	Yes/No	No	Yes	Yes	Yes	Yes	Yes
Air Quality Permit Required	Yes/No	No	No	No	No	No	No
Design Year Noise Sensitive Receptors ⁽¹²⁾							
No Impact	Number	9	--	--	--	--	9
Impacted	Number	0	--	--	--	--	0

(7) Total number of listed or potentially eligible for the National Register of Historic Places (NRHP) within the project area at County T.

(8) Previously identified archaeological sites within the project area.

(9) Assumes no Section 4(f) evaluation with crossing of Wild Rivers State Trail.

(10) Total wetlands filled (acres) within and outside of existing right of way.

(11) WDNR has identified protected species that have the potential to be located within the project area. See Threatened and Endangered Species Evaluation Factor Sheet.

(12) Total number of residences, commercial, or industrial establishments represented by modeled receptor locations at County T. See Traffic Noise Evaluation Factor Sheet.

Basic Sheet 5

Alternatives Comparison Matrix (US 53 at County T continued)

(All estimates, including costs, are based on conditions described in this document at the time of preparation. Additional agency or public involvement may change these estimates in the future.)

Note: Impacts associated with studied alternatives at County T are summarized the Alternatives Matrices in Appendix C. Estimates described in the Alternatives Matrices in Appendix C and the Alternatives Comparison Matrix below are based on concept designs identified during the evaluation of grade separation and interchange types. Estimates provided below and in the attached factor sheets for the Preferred Alternatives at US 53 and County T are based on preliminary engineering design. In general, potential impacts were minimized with preliminary engineering and design studies.

ENVIRONMENTAL ISSUE	UNIT MEASURE	ALTERNATIVES/SECTIONS					
		No Action	Alt. 1 (Standard Diamond with 900' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 1)	Alt. 3 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 2)	Alt. 4 (Folded Diamond, County T Realigned, Option 2)	Preferred Alternative ⁽¹⁾ (Jug Handle Configuration)
Environmental Issues							
Contaminated Sites identified - Phase I Hazardous Material Assessment ⁽¹³⁾	Number	0	2	2	2	2	2

(13) Three contaminated sites were identified within a 1.5-mile radius of US 53 at County T. One of these sites is not within close proximity to the US 53/County T intersection (located south of the Douglas/Washburn County line). See Hazardous Substances or Contamination Evaluation Factor Sheet.

Basic Sheet 6
Traffic Summary Matrix (US 53 at County F)

Note: The traffic summary matrix provided below is for the Preferred Alternative at US 53 and County F. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at County F.

	ALTERNATIVES/SECTIONS					
	No Action	Alt. 1 (Standard Diamond with 600' Intersection Spacing)	Alt. 2 (Folded Diamond with 1,300' Intersection Spacing, County F under US 53)	Sub-Alt. 2A (Folded Diamond with 1,300' Intersection Spacing, County F over US 53)	Alt. 3 (Folded Diamond with 1,400' Intersection Spacing)	Preferred Alternative (Jug Handle Configuration)
TRAFFIC VOLUMES						
Existing ADT Yr. 2010 ⁽¹⁾	US 53: 5,200 County F: 690	US 53: 5,200 County F: 690	US 53: 5,200 County F: 690	US 53: 5,200 County F: 690	US 53: 5,200 County F: 690	US 53: 5,200 County F: 690
Const. Yr. ADT Yr. <u>N/A</u> ⁽²⁾						
Const. Plus 10 Yr. ADT Yr. <u>N/A</u> ⁽²⁾						
Design Yr. ADT Yr. 2030	US 53: 6,100 County F: 810	US 53: 6,100 County F: 810	US 53: 6,100 County F: 810	US 53: 6,100 County F: 810	US 53: 6,100 County F: 810	US 53: 6,100 County F: 810
DHV Yr. 2030	US 53: 820 County F: 110	US 53: 820 County F: 110	US 53: 820 County F: 110	US 53: 820 County F: 110	US 53: 820 County F: 110	US 53: 820 County F: 110
TRAFFIC FACTORS						
K30 [_{30/100/200}] (%)	13.4	13.4	13.4	13.4	13.4	13.4
D (%)	58	58	58	58	58	58
Design Year T (% of ADT)	5.9	5.9	5.9	5.9	5.9	5.9
T (% of DHV)	4.7	4.7	4.7	4.7	4.7	4.7
Level of Service		A	A	A	A	A

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K [_{30/100/200}] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

(1) Year 2010 volume for US 53, north of County F. Year 2002 volume for County F, east of US 53.

(2) Not applicable. There are no project or construction dollars programmed for this portion of the US 53 corridor. The construction year ADT and construction plus 10 year ADT will be identified as part of future studies when the project is programmed for construction.

**Basic Sheet 6
Traffic Summary Matrix (US 53 at County F continued)**

Note: The traffic summary matrix provided below is for the Preferred Alternative at US 53 and County F. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at County F.

	ALTERNATIVES/SECTIONS					
	No Action	Alt. 1 (Standard Diamond with 600' Intersection Spacing)	Alt. 2 (Folded Diamond with 1,300' Intersection Spacing, County F <i>under</i> US 53)	Sub-Alt. 2A (Folded Diamond with 1,300' Intersection Spacing, County F <i>over</i> US 53)	Alt. 3 (Folded Diamond with 1,400' Intersection Spacing)	Preferred Alternative (Jug Handle Configuration)
SPEEDS						
Existing Posted	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 55 mph
Future Posted	US 53: 65 mph County F: 55 mph	US 53: 65 mph County F: 40 mph	US 53: 65 mph County F: 40 mph	US 53: 65 mph County F: 40 mph	US 53: 65 mph County F: 40 mph	US 53: 65 mph County F: 40 mph
Design Year (2030) Project Design Speed		County F: 45 mph	County F: 45 mph	County F: 45 mph	County F: 45 mph	County F: 45 mph
OTHER (Specify)						
P (% of ADT)						
K (% OF ADT)						

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K [30/100/200] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

Basic Sheet 6
Traffic Summary Matrix (US 53 at WIS 77)

Note: The traffic summary matrix provided below is for the Preferred Alternative at US 53 and WIS 77. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at WIS 77.

	ALTERNATIVES/SECTIONS						
	No Action	Alt. 1 (Standard Diamond with 800' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Spacing, WIS 77 realigned to south)	Alt. 3 (Split Diamond)	Alt. 4 (Tight Diamond with 400' Spacing)	Alt. 6 (Single Point Interchange)	Preferred Alternative (Folded Diamond, Loop in SW, 900' Intersection Spacing)
TRAFFIC VOLUMES							
Existing ADT Yr. 2010	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000	US 53: 4,400 WIS 77: 3,000
Const. Yr. ADT Yr. N/A ⁽¹⁾							
Const. Plus 10 Yr. ADT Yr. N/A ⁽¹⁾							
Design Yr. ADT Yr. 2030	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300	US 53: 5,300 WIS 77: 3,300
DHV Yr. 2030	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440	US 53: 705 WIS 77: 440
TRAFFIC FACTORS							
K30 _[30/100/200] (%)	13.4	13.4	13.4	13.4	13.4	13.4	13.4
D (%)	58	58	58	58	58	58	58
Design Year T (% of ADT)	5.9	5.9	5.9	5.9	5.9	5.9	5.9
T (% of DHV)	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Level of Service		B	B	B	B	B	B

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K _[30/100/200] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

(1) Not applicable. There are no project or construction dollars programmed for this portion of the US 53 corridor. The construction year ADT and construction plus 10 year ADT will be identified as part of future studies when the project is programmed for construction.

Basic Sheet 6
Traffic Summary Matrix (US 53 at WIS 77 continued)

Note: The traffic summary matrix provided below is for the Preferred Alternative at US 53 and WIS 77. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at WIS 77.

	ALTERNATIVES/SECTIONS						
	No Action	Alt. 1 (Standard Diamond with 800' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Spacing, WIS 77 realigned to south)	Alt. 3 (Split Diamond)	Alt. 4 (Tight Diamond with 400' Spacing)	Alt. 6 (Single Point Interchange)	Preferred Alternative (Folded Diamond, Loop in SW, 900' Intersection Spacing)
SPEEDS							
Existing Posted	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾
Future Posted	US 53: 65 mph WIS 77: 55 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾	US 53: 65 mph WIS 77: 40 mph ⁽²⁾ WIS 77: 30 mph ⁽³⁾
Design Year (2030) Project Design Speed		US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾	US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾	US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾	US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾	US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾	US 53: 70 mph WIS 77: 45 mph ⁽⁴⁾ WIS 77: 40 mph ⁽⁵⁾
OTHER (Specify)							
P (% of ADT)							
K (% OF ADT)							

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K [30/100/200] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

(2) WIS 77 posted speed west of US 53.

(3) WIS 77 posted speed east of US 53.

(4) WIS 77 design speed west of US 53 and on the WIS 77 bridge over US 53.

(5) WIS 77 design speed east of US 53.

Basic Sheet 6
Traffic Summary Matrix (US 53 at County T)

Note: The traffic summary matrix provided below is for Preferred Alternative at US 53 and County T. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at County T.

	ALTERNATIVES/SECTIONS					
	No Action	Alt. 1 (Standard Diamond with 900' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 1)	Alt. 3 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 2)	Alt. 4 (Folded Diamond, County T Realigned, Option 2)	Preferred Alternative (Jug Handle Configuration)
TRAFFIC VOLUMES						
Existing ADT Yr. 2010 ⁽¹⁾	US 53: 6,200 County T: 410	US 53: 6,200 County T: 410	US 53: 6,200 County T: 410	US 53: 6,200 County T: 410	US 53: 6,200 County T: 410	US 53: 6,200 County T: 410
Const. Yr. ADT Yr. <u>N/A</u> ⁽²⁾						
Const. Plus 10 Yr. ADT Yr. <u>N/A</u> ⁽²⁾						
Design Yr. ADT Yr. 2030	US 53: 6,500 County T: 670	US 53: 6,500 County T: 670	US 53: 6,500 County T: 670	US 53: 6,500 County T: 670	US 53: 6,500 County T: 670	US 53: 6,500 County T: 670
DHV Yr. 2030	US 53: 870 County T: 90	US 53: 870 County T: 90	US 53: 870 County T: 90	US 53: 870 County T: 90	US 53: 870 County T: 90	US 53: 870 County T: 90
TRAFFIC FACTORS						
K30 [_{30/100/200}] (%)	13.4	13.4	13.4	13.4	13.4	13.4
D (%)	58	58	58	58	58	58
Design Year T (% of ADT)	5.9	5.9	5.9	5.9	5.9	5.9
T (% of DHV)	4.7	4.7	4.7	4.7	4.7	4.7
Level of Service		A	A	A	A	A

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K [_{30/100/200}] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

(1) Year 2010 volume for US 53 north of County T near Solon Springs.

(2) Not applicable. There are no project or construction dollars programmed for this portion of the US 53 corridor. The construction year ADT and construction plus 10 year ADT will be identified as part of future studies when the project is programmed for construction.

Basic Sheet 6
Traffic Summary Matrix (US 53 at County T continued)

Note: The traffic summary matrix provided below is for Preferred Alternative at US 53 and County T. Traffic volumes, factors, and speeds are not expected to differ among the alternatives studied at County T.

	ALTERNATIVES/SECTIONS					
	No Action	Alt. 1 (Standard Diamond with 900' Intersection Spacing)	Alt. 2 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 1)	Alt. 3 (Standard Diamond with 800' Intersection Spacing, County T Realigned, Option 2)	Alt. 4 (Folded Diamond, County T Realigned, Option 2)	Preferred Alternative (Jug Handle Configuration)
SPEEDS						
Existing Posted	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 55 mph
Future Posted	US 53: 65 mph County T: 55 mph	US 53: 65 mph County T: 40 mph	US 53: 65 mph County T: 40 mph	US 53: 65 mph County T: 40 mph	US 53: 65 mph County T: 40 mph	US 53: 65 mph County T: 40 mph
Design Year (2030) Project Design Speed		County T: 45 mph	County T: 45 mph	County T: 45 mph	County T: 45 mph	County T: 45 mph
OTHER (Specify)						
P (% of ADT)						
K (% OF ADT)						

ADT = Average Daily Traffic, DHV = Design Hourly Volume

K [30/100/200] : K₃₀ = Interstate, K₁₀₀ = Rural, K₂₀₀ = Urban, % = ADT in DHV, D = % DHV in predominate direction of travel

T = Trucks, P = % ADT in peak hour

K₈ = % ADT occurring in the average of the 8 highest consecutive hours of traffic on an average day. (Only required when a carbon monoxide analysis must be performed per Wisconsin Administrative Code - Chapter NR 411.)

Basic Sheet 7
EIS Significance Criteria

When the significance of impact of a transportation project proposal is uncertain, an environmental assessment (EA) is prepared to assist in making this determination. If it is found that significant impact(s) will result, the preparation of an environmental impact statement (EIS) should commence immediately. Indicate whether the issue listed below is a concern for the proposed action or alternative. If the issue is a concern, explain how it is to be addressed or where it is addressed in this environmental document.

1) Will the proposed action stimulate substantial indirect environmental effects?

No

Through screening analysis using WisDOT's pre-screening effects procedure and FDM guidance on indirect effects, it is concluded that the factors of the project, its location, and other conditions do not warrant further detailed analysis of the potential for indirect effects. Refer to the *Indirect and Cumulative Effects Prescreening Analysis* in Appendix I.

Yes – Explain or indicate where addressed.

2) Will the proposed action contribute to cumulative effects of repeated actions?

No

Refer to the *Indirect and Cumulative Effects Prescreening Analysis* in Appendix I.

Yes – Explain or indicate where addressed.

3) Will the creation of a new environmental effect result from this proposed action?

No

Yes – Explain or indicate where addressed.

4) Will the proposed action impact geographically scarce resources?

No

Yes – Explain or indicate where addressed.

5) Will the proposed action have a precedent-setting nature?

No

Yes – Explain or indicate where addressed.

6) Is the degree of controversy associated with the proposed action high?

No

Yes – Explain or indicate where addressed.

7) Will the proposed action be in conflict with official agency plans or local, state, or national policies, including conflicts resulting from potential effects of transportation on land use and land use on transportation demand?

No

Yes – Explain or indicate where addressed.

Basic Sheet 8
Environmental Commitments

Identify and describe any commitments made to protect the environment. Indicate when the commitment should be implemented and who in WisDOT will have jurisdiction to assure fulfillment for each commitment. Note if the commitment will be recorded in the plans, "special provisions", "notes to construction" or some other written format. Note if the commitment is mandated by law, and therefore legally binding.

Commitments on Basic Sheet 8 supplement environmental commitments incorporated in WisDOT's Standard Specifications for Highway and Bridge Construction.

ATTACH A COPY OF THIS PAGE TO THE DESIGN STUDY REPORT AND THE PS&E SUBMITTAL PACKAGE

Factors	Commitments
A-1 General Economics	N/A
A-2 Business	One business relocation would be necessary and will be completed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970(Uniform Act), as amended. Before initiating property acquisition activities, property owners would be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Commitment will be implemented in conjunction with project right of way acquisitions. Future WisDOT PM to fulfill.
A-3 Agriculture	At the time that any part of this project, or a portion thereof is scheduled for construction, DATCP will be notified. If more than five acres of property would be acquired from any agricultural operation, an Agricultural Impact Statement (AIS) must be prepared. If five acres or less is involved, DATCP has discretion whether to prepare an AIS.
B-1 Community or Residential	Residential acquisitions and relocations will be completed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended. Before initiating property acquisition activities, property owners would be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Commitment will be implemented in conjunction with project right of way acquisitions. Future WisDOT PM to fulfill.
B-2 Indirect Effects	N/A
B-3 Cumulative Effects	N/A
B-4 Environmental Justice	N/A
B-5 Historic Resources	The Lampson School/Brooklyn Town Hall, located in the northeast quadrant of US 53 and County F, was determined eligible for listing in the National Register of Historic Places. To minimize the adverse effect to the property's setting and feeling as a result of the project, a row of trees should be maintained between the Lampson School/Brooklyn Town Hall property boundary, the proposed County F alignment, and Birchwood Drive. If all existing trees are cleared for construction, then a new row of trees will be planted. Future WisDOT PM to fulfill.
B-6 Archaeological Sites	Site # 47WB0084 is previously identified archaeological site located in the southwest quadrant of the County F grade separation. According to the Archaeology Site Inventory form, Site # 47WB0084 is a historic dump composed of food and drink containers and food preparation items. Many complete bottles that were identified contained the federal warning concerning the resale or reuse indicating that they were produced between 1933 and 1964. During design and prior to construction of the proposed project, an archaeology survey will be completed in the southwest quadrant of the County F grade separation if determined necessary. Future WisDOT PM to fulfill.
B-7 Tribal Issues	N/A
B-8 Section 4(f) and 6(f) or Other Unique Areas	N/A

Basic Sheet 8
Environmental Commitments (continued)

Factors	Commitments
B-9 Aesthetics	N/A
C-1 Wetlands	<p>WisDOT will explore the potential for on-site wetland mitigation opportunities during design/construction of the Proposed Action, consistent with rules and regulations in place at that time. Section 404 coordination will occur with WDNR and US Army Corps of Engineers during design and prior to construction.</p> <p>Compensation for unavoidable wetland loss will follow procedures identified in WisDOT's Wetland Technical Mitigation Banking Technical Guidelines at the time of design and construction. Future WisDOT PM to fulfill.</p>
C-2 Rivers, Streams & Floodplains	<p>In-stream related construction may need to be restricted during spawning and nursery period for trout in Shell Creek, a Class II brook trout stream. If Shell Creek is raised or widened at Shell Creek, a hydraulic and hydrologic (H & H) study may be needed to ensure that the culvert would be properly sized and would not increase backwater flood elevations. Details of the design would be developed after further consultation with WDNR. Future WisDOT PM to fulfill.</p> <p>Shell Creek is a Class II brook trout stream and an outstanding resource water (ORW). During the design stage, WisDOT will work with WDNR to determine any timing restrictions to prevent in-stream related construction during the spawning and nursery period for trout. Future WisDOT PM to fulfill.</p>
C-3 Lakes or other Open Water	<p>During the design stage, WisDOT will coordinate with WDNR regarding Trans 401 stormwater standards in place at that time to minimize impacts to Silver Lake.</p> <p>A small floodplain is located at US 53 and County F where County F currently runs adjacent to the southern portion of Silver Lake. As required under chapter NR 116, Wisconsin's Floodplain Management Program, if the road alignment would be raised or any fill would need to be brought into this area, it may be necessary to conduct a study to determine if these activities would change the flood elevations associated with the lake. Future WisDOT PM to fulfill.</p>
C-4 Groundwater, Wells and springs	<p>Preliminary design construction limits of the proposed US 53 interchange at WIS 77 are within the 1,000-foot wellhead protection area associated with the Village of Minong municipal wells. Stormwater management measures will be identified during design, based on Trans 401 requirements and other rules and regulations in place at that time. If necessary, additional studies would be conducted in accordance with Trans 401 requirements to determine groundwater elevation and flow. Future WisDOT PM to fulfill.</p>
C-5 Upland Wildlife and Habitat	N/A
C-6 Coastal Zones	N/A
C-7 Threatened and Endangered Species	<p>An endangered and threatened species evaluation would be done before any future improvements are implemented. If any listed species are identified, consultation with the WDNR and USFWS would occur during both the design and construction phases of the project to avoid, minimize, and mitigate potential impacts. Future WisDOT PM to fulfill.</p>
D-1 Air Quality	N/A
D-2 Construction Stage Sound Quality	<p>Check all that apply:</p> <p><input checked="" type="checkbox"/> WisDOT Standard Specification 107.8(6) and 108.7.1 will apply.</p> <p><input type="checkbox"/> Special construction stage noise abatement measures will be required. Describe:</p> <p>Future WisDOT PM to fulfill.</p>

Basic Sheet 8
Environmental Commitments (continued)

Factors	Commitments
D-3 Traffic Noise	No commitments needed.
D-4 Hazardous Substances or Contamination	<p>If substantial changes to the proposed US 53/County T grade separation are identified during design, then a Phase 2 Assessment may be warranted to determine the extent of potential petroleum-related contamination at property located northeast of US 53 and County T.</p> <p>Site 15 is located within existing WisDOT right of way at the existing southbound US 53/County T intersection. A Phase 3 investigation may be necessary if any excavation is needed at the existing US 53/County T intersection. Any petroleum contamination encountered during construction would be handled in accordance with state regulations in place at that time. Future WisDOT PM to fulfill.</p> <p>Five sites of minor concern identified by visual inspection near US 53/WIS 77 interchange may require further investigation during design. Disposal of any contamination in accordance with state regulations. Future WisDOT PM to fulfill.</p>
D-5 Stormwater	The Proposed Action will be designed to meet Trans 401 stormwater standards in place at the time of design activities. A Stormwater Management Plan would be developed and incorporated into the project's design to reduce or minimize runoff effects to surrounding waters of the state in coordination with the WDNR. Future WisDOT PM to fulfill.
D-6 Erosion Control	Construction site erosion and sediment control would be part of the project's design and construction as set forth in Trans 401 Wis. Adm. Code and the WisDOT/WNDR Cooperative Agreement requirements in place at that time. An Erosion Control Implementation Plan (ECIP) would be prepared by the contractor and approved by WDNR prior to construction. Future WisDOT PM to fulfill.

GENERAL ECONOMICS EVALUATION

Factor Sheet A-1

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets.
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

1. Briefly describe the existing economic characteristics of the area around the project:

Economic Activity	Description
a. Agriculture	Agriculture is a part of the rural economy in Washburn county. (There is little farmland in Douglas County). Although agricultural entities are not one of the top three employers by industry in the project vicinity, the amount of resources dedicated to agriculture makes it important to the local economies.
b. Retail business	Retail trade is a top employer in the Village of Minong, likely due to the many businesses that have developed along the intersection of US 53 and WIS 77.
c. Wholesale business	There are several wholesale businesses in the project area who are engaged in selling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.
d. Heavy industry	Manufacturing is a top industry in the project area, likely due to proximity to several large manufacturing companies such as Link Snacks, Inc. in Minong.
e. Light industry	See above.
f. Tourism	The tourism sector (arts, entertainment, recreation, accommodation, and food service) is important to the Village of Minong and the surrounding area. More than 25 percent of all people employed in Washburn County are in jobs related to tourism, earning an estimated \$32 million in wages generated from tourist spending (data is only available on a county-wide basis).
g. Recreation	See above.
h. Forestry	In Washburn and Douglas counties, a portion of revenues from timber harvesting is paid directly to the townships and the remaining portion is returned to the County's General Fund. This money is used to support recreational programs and environmental/forest preservation.

2. Discuss the economic advantages and disadvantages of the proposed action and whether advantages would outweigh disadvantages. Indicate how the project would affect the characteristics described in item 1 above:

The Proposed Action would have several economic benefits over the existing conditions:

- Provide safer access to businesses and commercial operations along US 53.
- Assist in ensuring the economic viability of the region by promoting safer and more efficient travel on US 53.
- Limit delays for both local (short-distance) and regional (long-distance) traffic on the state and county highway system.
- Promote the efficient transportation of raw materials, goods, and services between markets.
- Accommodate the current and planned economic growth and development in the area.
- Assist in ensuring safer and more efficient access for emergency vehicles.

The Proposed Action's economic disadvantages include:

- Direct access closure of some private and agricultural accesses on US 53. This will cause more circuitous travel routes for vehicles accessing these properties.
- Increased travel time to/from some locations along the US 53 corridor.
- Acquisition of one commercial property.
- Temporary disruptions during project construction.
- Requires capital investment by WisDOT that could not be expended elsewhere.

3. What effect will the proposed action have on the potential for economic development in the project area?

The proposed project will have no effect on economic development.

The proposed project will have an effect on economic development.

Increase, describe: _____

In general, the Proposed Action would increase the potential for economic development in the area. Interchanges often draw commercial development, such as gas stations, restaurants, and retail stores. An existing commercial node is located at the US 53/WIS 77 at-grade intersection. While the Proposed Action does not induce the demand for more commercial development in the Village of Minong and around the proposed interchange at WIS 77, it does influence the location where this future development is likely to occur. This development is anticipated and consistent with the Village of Minong's future land use plan (see Basic Sheet 2, Item 6 – Adopted Local or Regional Plans for the Project Area and Zoning Regulations).

Existing businesses and commercial operations in the project area would benefit from safe access to/from their operations. The separation of traffic destined to local commercial areas from regional traffic would improve mobility and circulation for customers destined to these locations.

The Proposed Action could also ultimately benefit local farming and forestry efforts by relocating competing land uses (commercial, highway-dependent) to safe access points along US 53 where they would not be in conflict with agricultural and commercial forest land uses near existing at-grade intersections.

Decrease, describe: _____

Factor Sheet A-2

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Is a Conceptual Stage Relocation Plan attached to this document?

- Yes
- No - (Explain)

Per WisDOT's Facilities Development Manual 3-10-20, inclusion of the assessment of potential relocations on the factor sheet constitutes the "Conceptual State Relocation Plan."

2. Describe the economic development or existing business areas affected by the proposed action:

US 53 is a major north-south freeway/expressway running through the middle of Douglas and Washburn counties that provides safe and efficient connectivity to regional population centers. Thus, a great proportion of the local economic activity occurs near the cities and towns located along this highway. Interchanges on major freeways/expressways often draw commercial development, such as gas stations, restaurants, and retail stores. An existing commercial node is located at US 53 and WIS 77 in the Village of Minong. While the Proposed Action does not induce the demand for more commercial development in the Village of Minong and around the proposed grade separation improvements at WIS 77, it may influence the location of future development.

County F

One commercial business is located along the west side of US 53 across from the east leg of County F.

WIS 77

One commercial property, an RV dealership in the Village of Minong, is expected to be impacted by the Proposed Action. Two additional vacant commercial buildings along WIS 77 would also be impacted by the proposed action. The Village of Minong is located along two major transportation thoroughfares, US 53 and WIS 77. These roadways provide transportation routes for goods and services and connect the village with outlying communities and larger population centers. Commercial development has taken advantage of these transportation corridors, evident by the number of commercial businesses located along these routes, particularly along WIS 77 (Hokah Street). Commercial development is generally focused on major transportation corridors due to the larger traffic volumes. Industrial development has also been influenced by the village's transportation network. Industrial parks in the Village of Minong have easy on/off access to US 53 and WIS 77.

CTHT

One commercial business is located along the east side of US 53 at Red Lake Road.

3. Identify and discuss existing modes of transportation and their traffic within the economic development or existing business area:

The primary mode of transportation within the economic development area includes automobiles and truck traffic. According to US Census data (2006-2010 American Community Survey 5-Year Estimates), the majority of residents in Washburn and Douglas counties drive alone to work. Approximately 9 percent of Washburn and Douglas County residents are estimated to carpool to work. The mean travel time to work is estimated at approximately 20 minutes (approximately 15 minutes for residents in the Village of Minong). It is likely that drivers within the study area travel on major state highways, such as US 53 and WIS 77, during a portion of their commute. Bike and pedestrian traffic is also present, the majority in the Village of Minong. There are no modes of public transportation available in the project area.

4. Identify and discuss effects on the economic development potential and existing businesses that are dependent upon the transportation facility for continued economic viability:

- The proposed project will have no effect on a transportation-dependent business or industry.
- The Proposed Action may change the conditions for a business that is dependent upon the transportation facility. Identify effects, including effects which may occur during construction.

Current Proposed Project (Official Mapping)

The current proposed project (official mapping) would not result in any relocations. Official mapping would designate existing property as future right of way needs, and would inform local governments of future access locations so that local development can be planned accordingly.

Future Proposed Project (Future Project Construction)

Future project construction would require the relocation of one business at the proposed US 53/WIS 77 interchange. It is anticipated that this relocation would occur closer to the time of project construction.

Closure of existing access points to US 53 to the north and south of WIS 77 would result in an increase in travel time for some businesses to and from US 53 (depending upon the location of the business). Median closure at US 53 and County F would result some indirection and increase in travel time from northbound US 53 to properties along the west side of the highway. Median closure at the existing County T/Red Lake Road access with US 53 would result in some indirection and increase in travel time from southbound US 53 to properties along the east side of the highway. Right-in/right-out access from northbound US 53 would be provided at Red Lake Road.

5. Describe both beneficial and adverse effects on:

- A. The existing business area affected by the Proposed Action. Include any factors identified by business people that they feel are important or controversial.

The Proposed Action promotes safer access to businesses and commercial operations along US 53, safer and more efficient travel on US 53, and provides for the efficient transportation of raw materials, goods, and services between markets. The Proposed Action would result in the relocation of one commercial business and acquisition of two vacant commercial buildings, direct access closure of some private and agricultural access along US 53, increase travel time to/from some locations, and temporary disruptions during project construction. No known important or controversial factors have been identified by business people.

- B. The existing employees in businesses affected by the proposal. Include, as appropriate, a discussion of effects on minority populations or low-income populations.

It is possible that the 5-10 employees who are anticipated to be displaced by the Proposed Action could maintain employment at a new location.

6. Estimated number of businesses and jobs that would be created or displaced because of the project:

Business/Job Type	Businesses			Jobs	
	Created	Displaced	Value	Created	Displaced
Retail		1	\$350,000		5-10
Service					
Wholesale					
Manufacturing					
Other (List)					

7. Are any owners or employees of created or displaced businesses elderly, disabled, low-income or members of a minority group?

- No
- Yes – If yes, complete Factor Sheet B-4, Environmental Justice Evaluation.

One business would be relocated with the proposed interchange at US 53 and WIS 77. As noted above, official mapping would not necessitate business relocation. It is anticipated that relocation would occur closer to the time of project construction. Because of the timeframe for construction is unknown, a detailed evaluation of the demographic makeup of owners or employees of created or displaced businesses is not practical at this time. Demographics of owners or employees would be identified in the future at the time of project construction. Any special relocation assistance needed will be provided consistent with WisDOT practices and requirements in place at that time.

AGRICULTURE EVALUATION

Wisconsin Department of Transportation

Factor Sheet A-3

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Total acquisition interest, by type of agricultural land use:

Type of Land Acquired From Farm Operations	Type of Acquisition (acres)		Total Area Acquired (acres)
	Fee Simple	Easement	
Crop land and pasture	3.3 ac (County F) 4.9 ac (WIS 77) 0 ac (County T) 8.2 ac Total	0	3.3 ac (County F) 4.9 ac (WIS 77) 0 ac (County T) 8.2 ac Total
Woodland	16.8 ac (County F) 14.0 ac (WIS 77) 7.2 ac (County T) 38.0 ac Total	0	16.8 ac (County F) 14.0 ac (WIS 77) 7.2 ac (County T) 38.0 ac Total
Land of other uses (e.g., wetlands, yards, roads, etc.)	0.8 ac (County F) 18.8 ac (WIS 77) 2.8 ac (County T) 22.4 ac Total	0	0.8 ac (County F) 18.8 ac (WIS 77) 2.8 ac (County T) 22.4 ac Total
Totals	20.9 ac (County F) 37.7 ac (WIS 77) 10.0 ac (County T) 68.6 ac Total	0	20.9 ac (County F) 37.7 ac (WIS 77) 10.0 ac (County T) 68.6 ac Total

2. Indicate number of farm operations from which land will be acquired:

Acreage to be Acquired	Number of Farm Operations ⁽¹⁾
Less than 1 acre	0
1 acre to 5 acres	2
More than 5 acres	0

⁽¹⁾ Number of individual property owners whose land includes crop land and pasture uses. More than 15 individual property owners have parcels in woodland uses (e.g., forest stands or rural residential properties dominated by woodland vegetation).

3. Is land to be converted to highway use covered by the Farmland Protection Policy Act (FPA)?

No

- The land was purchased prior to August 6, 1984 for the purpose of conversion.
- The acquisition does not directly or indirectly convert farmland.
- The land is clearly not farmland
- The land is already in, or committed to urban use or water storage.

Current Proposed Project (Official Mapping)

The current project (official mapping) would not result in the conversion of farmland to other uses.

Future Proposed Project (Future Project Construction)

The future construction of the Proposed Action would convert farmland to highway use. Additional coordination would occur with the Natural Resources Conservation Service (NRCS) and Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) during design, as needed.

- Yes (This determination is made by the Natural Resources Conservation Service (NRCS) via the completion of the Farmland Impact Conversion Rating Form, NRCS Form AD-1006)
- The land is prime farmland which is not already committed to urban development or water storage.

- The land is unique farmland.
- The land is farmland which is of statewide or local importance as determined by the appropriate state or local government agency.

4. Has the Farmland Impact Conversion Rating Form (AD-1006) been submitted to NRCS?

- No - Explain.
- Yes
 - The Site Assessment Criteria Score (Part VI of the form) is less than 60 points for the Preferred Alternative at US 53 and County T.
Date Form AD-1006 completed. Completed May 2013.
See NRCS Northwest Area Office correspondence in Appendix F.
 - The Site Assessment Criteria Score is 60 points or greater for the Preferred Alternative at US 53 and County F, and for the Preferred Alternative at US 53 and WIS 77.
Date Form AD-1006 completed. Completed May 2013.
See also NRCS Northwest Area Office correspondence in Appendix F.

5. Is an Agricultural Impact Statement (AIS) Required?

- No
 - Eminent Domain will not be used for this acquisition
 - The project is a "Town Highway" project
 - The acquisition is less than 1 acre
 - The acquisition is 1-5 acres and DATCP chooses not to do an AIS.
 - Other. The DATCP requests re-notification when WisDOT moves forward with farmland acquisition.
- Yes
 - Eminent Domain may be used for this acquisition.
 - The project is not a "Town Highway" project
 - The acquisition is 1-5 acres and DATCP chooses to do an AIS.
 - The acquisition is greater than 5 acres

6. Is an Agricultural Impact Notice (AIN) Required?

- No, the project is not a State Trunk Highway Project - AIN not required but complete questions 7-16.
- Yes, the project is a State Trunk Highway Project - AIN may be required.
Is the land acquired "non-significant"?
 - Yes - (All must be checked) An AIN is not required but complete questions 7-16.
 - Less than 1 acre in size
 - Results in no severances
 - Does not significantly alter or restrict access
 - Does not involve moving or demolishing any improvements necessary to the operation of the farm
 - Does not involve a high value crop
 - No
 - Acquisition 1 to 5 acres - **AIN required.** Complete Pages 1 and 2, Form DT1999, (Pages 1 and 2, Figure 1, Procedure 21-25-30.)
 - Acquisition over 5 acres - **AIN required.** Complete Pages 1, 3 and 4, Form DT1999. (Pages 1, 3 and 4, Figure 1, Procedure 21-25-30)

An AIN was completed and sent to the DATCP. As indicated on the AIN provided to DATCP, no one farm operation involves the acquisition of more than five acres. The response from the DATCP states that an AIS will not be prepared for this project at this time. The DATCP requested that they be re-notified when WisDOT decides to move forward with the acquisition of farmland. See Appendix F for correspondence received and sent to the DATCP.

COMMUNITY OR RESIDENTIAL EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-1

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Give a brief description of the community or neighborhood affected by the proposed action:

Name of Community/Neighborhood Town of Brooklyn in Washburn County Incorporated <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Population 254 (2010 Census)
Demographic Characteristics <p>The Town of Brooklyn encompasses approximately 36 square miles. There are no incorporated communities within the town and only one unincorporated community (Lampson). The Town of Brooklyn can be characterized as rural with generally low development density, with the exception of shoreland areas, where housing densities are higher.</p> <p>Of the total population in 2010, approximately 27 percent were age 65 or older. The majority of residents (98 percent) reported their race as white. The remaining two percent reported their race as another racial category. The median household income was \$40,625 (US Census, 2007-2011 American Community Survey, 5-Year Estimates). Median household income is similar to the median household income for Washburn County, but below the median household income for the state. According to the 2010 Census, construction, manufacturing and retail trade are important industries in the community, as well as the educational, health, and social services industry.</p> <p>The Town of Brooklyn has relatively easy access to the communities of Spooner, Shell Lake, Hayward, Rice Lake, and Minong. There are very few businesses located in the town. Residents generally travel to nearby communities for work and to obtain goods and services.</p>

Name of Community/Neighborhood Village of Minong in Washburn County Incorporated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Total Population 527 (2010 Census)
Demographic Characteristics <p>The Village of Minong encompasses approximately 1.5 square miles. The dominant land use in this rural community is woodlands followed by agriculture.</p> <p>Of the total population in 2010, approximately 22 percent were age 65 or older. 93 percent of residents reported their race as white. The remaining seven percent reported their race as another racial category. The median household income was \$35,839 (US Census, 2007-2011 American Community Survey, 5-Year Estimates). Median household income is below the median level for both Washburn County and the state. According to the 2010 Census, manufacturing and retail trade are important industries in the community, as well as the educational, health, and social services industry.</p> <p>The village has a defined central business district in downtown Minong. A second commercial area near the western limits of the village is beginning to emerge as a result of the US 53 bypass. According to the Village of Minong Comprehensive Plan, additional development near the intersection of US 53 and WIS 77 is anticipated.</p>

Name of Community/Neighborhood

Town of Wascott in Douglas County

Incorporated

Yes No

Total Population

763 (2010 Census)

Demographic Characteristics

The Town of Wascott encompasses approximately 142 square miles and can be characterized as rural with generally low development density. More than half the town is forested with very little agricultural use.

According to the 2010 U.S. Census, approximately 32 percent were age 65 or older. 92 percent of residents reported their race as white. Another 6 percent reported their race as Black or African American (alone). The remaining two percent reported their race as another racial category. The median household income was \$53,958 (US Census, 2007-2011 American Community Survey, 5-Year Estimates). Household income is higher than the median level for Douglas County and for the state.

Year 2010 Census data indicates that the educational, health, and social services industry employed about 21 percent of residents followed by manufacturing (14 percent) and construction (14 percent). It is likely that some residents worked in the medical or educational field in Duluth/Superior because of the town's proximity to those cities.

- 2. Identify and discuss existing modes of transportation and their importance within the community or Neighborhood:** The primary mode of transportation within the communities includes automobile and truck travel for local and regional trips on US 53, as well as county and local roadways. US 53 serves local and regional trips for a variety of purposes, and also serves recreational, business, and long-haul truck trips for travel to more distant locations.
- 3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:** The implementation of the Proposed Action would not be likely to cause changes in the mode of travel used. There would likely be some minor changes in automobile and truck traffic patterns on the local road system, and some added indirection and changes in travel times to and from some locations.
- 4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:** Currently, there is the potential for development to occur adjacent to any of the at-grade crossings at County F, WIS 77, or County T. The proposed grade-separation improvements at these locations would eliminate some access to US 53 and convert some access to right-in, right-out only. Any development on the lands near these existing crossings would be accessed by alternative local road connections. Traffic on these local roads would not be enough to alter their current capacity or functionality. The removal of direct access to US 53 could minimize the potential for indirect development at these locations.

Access to US 53 from land adjacent to WIS 77 would be by way of the future interchange proposed at that location. It is likely that development potential at this location would remain unchanged with or without the construction of the interchange because access would be provided under either the build or no-build scenario.
- 5. Address any changes to emergency or other public services during and after construction of the proposed project:** Changes to emergency services include indirection (altered travel routes/distance) during construction and after access changes have been completed. Additional safe crossings of US 53 balance the safety and efficiency of emergency service responses with the potential indirection caused by those access changes.
- 6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:** The Proposed Action includes changes in direct access onto US 53 for existing crossings in the study area, including local roads, driveways, and agricultural accesses. In a few locations, access to property will change to be located onto local roads that do not access US 53. Because of the rural nature of the area, there are no sidewalks or terraces to be affected.

7. **Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:** Community facilities are not expected to be affected by implementation of the Proposed Action.
8. **Identify and discuss factors that residents have indicated to be important or controversial:** None identified.
9. **List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.** None identified.
10. **Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:**
- a. None identified.
 - b. No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
 - c. Occupied residential building(s) will be acquired. Provide number and description of buildings, e.g., single family homes, apartment buildings, condominiums, duplexes, etc.

Current Proposed Project (Official Mapping)

The current proposed project (official mapping) would not result in any residential acquisitions. Official mapping would designate existing property as future right of way needs, and would inform local governments of future access locations so that local development can be planned accordingly.

Future Proposed Project (Future Project Construction)

It is anticipated that one single-family residence along County F, east of US 53, would be acquired as a result of future project construction. It is anticipated that this residential acquisition would occur at a time closer to future project construction.

11. Anticipated number of households that will be relocated from the occupied residential buildings identified in item 10c, above:

Total Number of Households to be Relocated. 1
--

(Note that this number may be greater than the number shown in 10c) above because an occupied apartment building may have many households.)

a. Number by Ownership

Number of Households Living in Owner Occupied Building 1	Number of Households Living in Rented Quarters 0
---	---

b. Number of households to be relocated that have.

1 Bedroom unknown	2 Bedroom unknown	3 Bedroom unknown	4 or More Bedrooms unknown
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c. Number of relocated households by type and price range of dwelling.

Number of Single Family Dwelling. 1	Price Range unknown
Number of Multi-Family Dwellings 0	Price Range unknown
Number of Apartment 0	Price Range unknown

12. Describe the relocation potential in the community:

a. Number of Available Dwellings*

1 Bedroom	2 Bedrooms	3 Bedrooms	4 or More Bedrooms
7	40	31	12

* 5 dwellings did not provide bedroom counts.

b. Number of Available and Comparable Dwellings by Location

14 within 0-10 miles	11 within 10-20 miles
64 within 20-30 miles	6 within 30+ miles

c. Number of Available and Comparable Dwellings by Type and Price. (Include dwellings in price ranges comparable to those being dislocated, if any.)

Single Family Dwellings	Price Range
95	\$22,000 - \$150,000
Multi-Family Dwellings	
Apartments	

13. Identify all the sources of information used to obtain the data in item 12:

- WisDOT Real Estate Conceptual Stage Relocation Plan Multiple Listing Service (MLS)
 Newspaper Listing(s) Other – Identify: Individual Real Estate Sites

14. Indicate the number of households to be relocated that have the following special characteristics:

- None identified.
 Yes - _____ total households to be relocated. Complete table below

Special Characteristics	Number of Households with Individuals with Special Characteristics
Elderly	
Disabled	
Low income	
Minority	
Household of large family (5 or more)	
Not Known	
No special characteristics	

One residence would be acquired with the proposed grade separation at US 53 and County F. As noted above, official mapping would not necessitate this acquisition. Acquisition and relocation is anticipated to occur at a time closer to project construction. Because of the timeframe for construction is unknown, a detailed evaluation of the characteristics of this household is not practical at this time. Characteristics of the household to be relocated would be identified in the future at the time of project construction. Any special relocation assistance needed will be provided consistent with WisDOT practices and requirements in place at that time.

15. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24:

Residential acquisitions and relocations will be completed in accordance with the “Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended.” In addition to providing for payment of “Just Compensation” for property acquired, additional benefits are available to eligible displaced persons required to relocate from their residence. Some available benefits include relocation advisory services, reimbursement of moving expenses, replacement housing payments, and down payment assistance. In compliance with State law, no person would be displaced unless a comparable replacement dwelling would be provided. Federal law also requires that decent, safe, and sanitary replacement dwelling must be made available before any residential displacement can occur.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners would be contacted and given an explanation of the details of the acquisition process and Wisconsin’s Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired

would be inspected by one or more professional appraisers. The property owner would be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Based on the appraisal(s) made, the value of the property would be determined, and that amount offered to the owner.

Identify other relocation assistance requirements not identified above.

See the response to Item #14 above.

16. Identify any difficulties or unusual conditions for relocating households displaced by the proposed action:

None identified.

17. Indicate whether Special Relocation Assistance Service will be needed. Describe any special services or housing programs needed to remedy identified difficulties or unusual conditions noted in item #14 above:

X None identified

Yes - Describe services that will be required

18. Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected: None identified

ENVIRONMENTAL JUSTICE EVALUATION

Factor Sheet B-4

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative See Preferred Alternative descriptions in basic sheets.
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Identify and give a brief description of the populations covered under Executive Order 12898 (EO 12898). Include the relative size of the populations and their pertinent demographic characteristics: (Check all that apply.)

Population Groups	Low Income	Elderly	Disabled
<input type="checkbox"/> Black (having origins in any of the black racial groups of Africa) Describe:	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race) Describe:	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> Asian American (origins in any of the original peoples of the Far East, SE Asia, the Indian subcontinent, or the Pacific Islands) Describe:	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> American Indian and Alaska Native (having origins in any of the original people of North American and who maintains cultural identification through tribal affiliation or community recognition) Describe:	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> White and any combination of the above. Describe:	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input checked="" type="checkbox"/> Non-minority low-income population Describe: (see discussion below)		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

US 53 at County F (Town of Brooklyn)

No minority or low-income populations were identified within the project area at US 53 and County F. The minority population in the Town of Brooklyn is less than three percent of the total population, which is similar to Washburn County and less than the State of Wisconsin. The minority population in Washburn County is approximately four percent of the total population. The minority population in the State of Wisconsin is approximately 14 percent of the total population. Based on 2007-2011 American Community Survey estimates, the percent of all people below poverty level for the Town of Brooklyn is less than the percent of all people for Washburn County and the State of Wisconsin. See 2010 US Census data in Appendix E.

US 53 at WIS 77 (Village of Minong)

No minority populations were identified within the project area at US 53 and WIS 77 (Village of Minong). The minority population in the Town of Brooklyn is approximately seven percent of the total population, which is similar to Washburn County. As noted above, the minority population in Washburn County is approximately four percent of the total population. See 2010 US Census data in Appendix E.

2010 Census income and poverty levels for the Village of Minong, Washburn County, and the State of Wisconsin are shown in Table 1 (2007-2011 American Community Survey estimates). Based on 2007-2011 American Community Survey estimates, the percent of all people below poverty level for the Village of Minong is less than the percent of all people for Washburn County and the State of Wisconsin.

According to year 2010 Census data for the Village of Minong, persons age 65 and older represent approximately 22 percent (115 of 527 persons) of the total population for the Village of Minong. Twenty (20) percent of persons age 65 and older have incomes below the poverty level (2007-2011 American Community Survey), which is more than two times greater than the percentage of persons 65 and older for Washburn County (8.6 percent) and the State of Wisconsin (7.8 percent). An in-depth investigation of demographic data for the Village of Minong will be completed in the future at the time of project design.

**Table 1
Median Household Income, Per Capita Income and Poverty Levels for the Village of Minong, Washburn County, and the State of Wisconsin (2007-2011 American Community Survey)**

	Village of Minong	Washburn County	State of Wisconsin
Median household income (in 2011 inflation adjusted dollars)	\$35,839	\$41,135	\$52,374
Per capita income in 2011 (in 2011 inflation adjusted dollars)	\$21,246	\$23,989	\$27,192
Percent of all people below poverty level	7.3%	12.1%	12.0%
Percent of persons age 65 and older below poverty level	20.0%	8.6%	7.8%

Source: US Census Bureau, 2007-2011 American Community Survey.

Demographic information regarding disabilities is not yet available for the 2010 Census. Therefore, 2000 Census data was reviewed. Approximately one-third (36 percent) of the population in the Village of Minong reported a disability with the 2000 Census (Profile of Selected Social Characteristics, 2000 SF-3 Sample Data). This is greater than 21 percent of the population for Washburn County and 16 percent of the population for the State of Wisconsin.

US 53 at County T (Town of Wascott)

No minority or low-income populations were identified within the project area at US 53 and County T. The minority population in the Town of Wascott is approximately eight percent of the total population, which is similar to Douglas County and less than the State of Wisconsin. The minority population in Douglas County is also approximately eight percent of the total population. Based on 2007-2011 American Community Survey estimates, the percent of all people below poverty level for the Town of Wascott is less than the percent of all people for Douglas County and the State of Wisconsin. See 2010 US Census data in Appendix E.

2. How was information on the proposed action communicated to populations covered by Executive Order 12898. Check all that apply:

- Advertisements
- Newsletters
- Utility Bill Inserts
- Public Service Announcements
- Key Persons
- Brochures
- Notices
- E-mails
- Direct Mailings
- Other, identify _____

3. How was input from populations covered by EO 12898 obtained? Check all that apply:

- Mailed Surveys
- Door-to-door interviews
- Focus Group Research
- Public Hearings
- Other, identify _____
- Targeted Small Group Information Meetings
- Targeted Workshop/conferences
- Public Meetings
- Key Person Interviews

4. Indicate any special accommodations made to encourage participation from populations covered by EO 12898. Check all that apply:

- Interpreters
- Accessibility for Elderly & Disabled
- Child Care Provided
- Other, _____
- Listening Aids
- Transportation Provided
- Sign Language

5. If there is a project advisory committee, identify and describe committee members from populations covered by EO 12898

The project does not include a project advisory committee (PAC). Elected officials from the Village of Minong and Washburn County were invited to all local official and public involvement meetings.

- None identified
- Yes - Check all that apply and describe below:
 - Black
 - Hispanic
 - Asian-American
 - American Indian or Alaska Native
 - White and any combination of the above
 - Non-minority low-income
 Describe: _____

6. As a result of public involvement and inter-agency coordination, identify and describe issues of concern or controversy to populations covered by EO 12898:

A. Economic Development and Business

- No issues of concern or controversy identified.
- Yes - Issues of concern or controversy identified.
 1. List effects on businesses and populations covered by EO 12898:
 - None identified.
 - Yes.
 List and discuss - _____

Population Groups	Number of Businesses Created That Will:		Number of Businesses Displaced That:	
	Employ	Serve	Employ	Serve
Elderly				
Disabled				
Low income				
Minority				

2. List other effects.
 - None identified.
 - Yes
 List and discuss - _____

B. Agriculture

- No issues of concern or controversy identified.
- Yes - Issues of concern or controversy identified.
 1. List effects on agricultural operations owned by members of populations covered by EO 12898.
 - None identified.
 - Yes
 List and discuss - _____
 2. List effects on agricultural operations which employ members of populations covered by EO 12898, including migrant workers
 - None identified.
 - Yes
 List and discuss - _____
 3. List other effects on members of populations covered by EO 12898:
 - None identified.
 - Yes
 List and discuss - _____

C. Community/Residential

- No issues of concern or controversy identified.
- Yes - Issues of concern or controversy identified.
 - List and discuss - _____
 - 1. List relocation effects on households covered by EO 12898:
 - None identified.
 - Yes
 List and discuss - _____

Population Groups	Number of Households Relocated
Elderly	
Disabled	
Low income	
Minority	

2. List other effects on members of populations covered by EO 12898.

- None identified.
 Yes

List and discuss - _____

D. Other

- No issues of concern or controversy identified.
 Issues of concern or controversy identified.

List and discuss - _____

7. Indicate whether effects on populations covered by EO 12898 are beneficial or adverse:

A. Beneficial effects.

- Describe effects on populations and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to enhance beneficial effects. Describe methods used to determine beneficial effects resulting from the proposed project. (If only beneficial effects, process is complete.)

The need for the proposed action is to address safety at the existing US 53 and WIS 77 intersection. As described in Basic Sheet 2 (Purpose and Need for Proposed Action), 13 crashes were reported at the US 53/WIS 77 intersection for the five-year period from 2007-2011. As traffic volumes along the US 53 project corridor grow over time, demand for access and concerns regarding safety will continue to increase. In general, grade separations of intersecting roadways are more safe than at-grade intersections because the grade separation eliminates conflicting movements (e.g., left-turns across high-speed through traffic). Construction of the proposed grade separated interchange at US 53 and WIS 77 will result in safety benefits for the traveling public, including low income populations within the Village of Minong.

In addition, the proposed project includes the construction of a grade-separated crossing of US 53 at Shell Creek Road (see Figure 2B, Appendix D). This grade-separated crossing will replace the existing at-grade intersection as US 53 and Shell Creek Road. This crossing will provide an alternate route for local traffic to cross US 53 to and from the Village of Minong, and will also provide an alternate route for Village of Minong emergency services to access lands to the west of US 53.

B. Adverse effect.

1. Adverse Effects are proportional or disproportionately low. Identified adverse effects are proportionate or disproportionately low to those experienced by the general population.

Construction of the proposed interchange at US 53 and WIS 77 includes closure of existing at-grade intersections to US 53 in the Village of Minong. These access closures are illustrated in Figure 2A and Figure 2B, Appendix D. Closure of existing at-grade intersections will result in increases in travel time and travel distance for some Village of Minong residents to access US 53. However, as described above, the increases in travel time and distance are offset by safety benefits associated with construction of the proposed grade separated interchange at US 53 and WIS 77 and grade separated crossing at US 53 and Shell Creek Road. These safety benefits will be realized by all residents within the project area and users of the transportation network.

Describe effects on populations and discuss whether they are direct, indirect or cumulative. Describe methods used to determine adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate adverse effects. (If only beneficial or proportional or disproportionately low effects, process is complete.)

Not applicable.

2. Adverse Effects are disproportionately high. A disproportionately high and adverse effect means an adverse effect that:
- a.) is predominately borne by populations covered by EO 12898; or
 - b.) will be suffered by populations covered by EO 12898 and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by population not covered by EO 12898.

Not applicable.

Describe disproportionately high and adverse effects on populations covered by EO 12898 and discuss whether they are direct, indirect or cumulative. Describe methods used to determine adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate disproportionately high and adverse effects or enhance beneficial effects.

Not applicable.

8. Will the alternative be carried through final design even with disproportionately high and adverse effects on populations covered by EO 12898?

Not applicable.

- A. No, the alternative will not be carried out because of disproportionately high and adverse effects on populations covered by EO 12898.
- 1. Another alternative with less severe effects on populations covered by EO 12898 can meet the purpose and need of the proposed alternative and is practicable.
 - 2. Other.
Describe. _____
- B. Yes, the alternative will be carried out with the mitigation of disproportionately high and adverse effects on populations covered by EO 12898.
- 1. All disproportionate effects will be mitigated by the following measures.
List and discuss measures:
 - 2. The alternative will be carried through final design without fully mitigating disproportionately high and adverse effects. A substantial need for the alternative exists based on the overall public interest. Alternatives that would have less adverse effects on populations covered by EO 12898 have either:
 - a) Adverse social, economic, environmental, or human health impacts that are more severe.
 - b) Would involve increased costs of an extraordinary magnitude.

ARCHAEOLOGICAL SITES EVALUATION

Wisconsin Department of Transportation

Factor Sheet B-6

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

If there are any effects to an archaeological site and any American Indian Tribes express interest in the project, Factor Sheet B-7, the Cultural Resources Tribal Issues Factor Sheet must also be completed.

Section 106 Form or other documentation, with all necessary approvals, must be attached to the Environmental Document for all projects.

1. Parties Contacted:

See copies of Tribal correspondence in Appendix H.

Parties Contacted	Date Contacted	Comments Received		
		No	Yes	Check if Attached
Bad River Band of Lake Superior Chippewa Indians of Wisconsin	2/2008	X		<input type="checkbox"/>
Forest County Potawatomi Community of Wisconsin	2/2008	X		<input type="checkbox"/>
Ho-Chunk Nation	2/2008	X		<input type="checkbox"/>
Iowa Tribe of Oklahoma	2/2008	X		<input type="checkbox"/>
Lac Courte Oreilles Band of Lake Superior Chippewa Indians	2/2008	X		<input type="checkbox"/>
Lac du Flambeau Band of Lake Superior Chippewa Indians of Wisconsin	2/2008		X	<input checked="" type="checkbox"/>
Menominee Indian Tribe of Wisconsin	2/2008	X		<input type="checkbox"/>
Oneida Nation of Wisconsin	2/2008	X		<input type="checkbox"/>
Prairie Band Potawatomi Nation	2/2008		X	<input checked="" type="checkbox"/>
Red Cliff Band of Lake Superior Chippewa Indians	2/2008	X		<input type="checkbox"/>
Sac and Fox Nation of Missouri in Kansas and Nebraska	2/2008	X		<input type="checkbox"/>
Sac and Fox Nation of Oklahoma	2/2008	X		<input type="checkbox"/>
Sac and Fox of the Mississippi in Iowa	2/2008	X		<input type="checkbox"/>
Sokaogon (Mole Lake) Band of Chippewa Indians	2/2008	X		<input type="checkbox"/>
St. Croix Band of Lake Superior Chippewa Indians	2/2008	X		<input type="checkbox"/>
Stockbridge-Munsee Community Band of Mohican Indians	2/2008		X	<input checked="" type="checkbox"/>

2. Property Designations:

Not applicable.

- National Historic Landmark
- National Register of Historic Places (NRHP)
- State Register of Historic Places
- Local Registry
- Tribal Registry

3. Sites identified by record search or Phase I survey. Attach map to appendices depicting site(s)' approximate location within alternative):

Previously identified archaeological sites within the project area are listed below. No archaeological sites were identified in the project area. Maps from the Phase I Archaeological Survey are provided in Appendix G.

Site #	Site Name	Description & Site Information (e.g., historic, prehistoric, village, campsite, etc.)	Site Recommended for Phase II Evaluation? Y/N	Site Avoided? Y/N
47DG0040	Road Water	Historical Cabin or Homestead	N Site located outside of preliminary design slope-intercept limits	Y
47DG0069	Dump #6	Historical Dump	N Portion w/in project area previously disturbed by road construction	N ⁽¹⁾
47WB0067	D. Walter 1	Multiple Component Site	N Site located outside of preliminary design slope-intercept limits	Y
47WB0068	Cutbank	Precontact Village or Campsite	N Site located outside of preliminary design slope-intercept limits	Y
47WB0069	D. Walter 2	Precontact Village or Campsite	N Portion w/in project area previously disturbed by road construction	N ⁽¹⁾
47WB0084	Historic Dump #1	Historical Dump	N North end of site potentially located within preliminary design slope-intercept limits at US 53 and County F	N ⁽²⁾
47WB0113	Minong Dump #1	Historical Dump or Logging Camp	N Portion w/in project area previously disturbed by road construction	N ⁽¹⁾

(1) Site within areas previously subjected to archaeological survey and considered to have low potential for containing intact archaeological resources, and can therefore be excluded from future surveys.
 (2) See Item 6 below (Environmental Commitments).

4. Sites evaluated by Phase II survey:

Not applicable.

Site #	Site Name	Findings of Phase II Evaluation	Site Determined Eligible for or already listed in the NRHP? Y/N	Site Avoided? Y/N

5. Do any sites identified in Phase I or II investigations (Question 3 and 4) involve human burials?

No

Yes

American Indian Burial:
 Complete Factor Sheet B-7, Tribal Issues.

Euro-American Burial:
 Documentation Attached:
 Cemetery Name(s): _____

Consultation with Wisconsin Historical Society (Burial Sites Office and SHPO):
 Dates: _____

- Burials will not be affected:
Identify _____
- Burials will be affected:
Identify _____
- Documentation attached:
- Unknown Affiliation:

6. List Environmental Commitments to avoid impacts to sites listed as "Avoided" in Phases I and II, above (Also list on Basic Sheet 8, Environmental Commitments):

Site # 47WB0084 is previously identified archaeological site. According to the Archaeology Site Inventory form, Site # 47WB0084 is a historic dump composed of food and drink containers and food preparation items. Many complete bottles that were identified contained the federal warning concerning the resale or reuse indicating that they were produced between 1933 and 1964.

Site # 47WB0084 was initially avoided by the proposed County F alignment; however, a subsequent redesign of the proposed County F alignment was identified to avoid the Lampson School/Brooklyn Town Hall, located east of US 53 and Site # 47WB0084. The Lampson School/Brooklyn Town Hall is a historic schoolhouse that was determined potentially eligible for the National Register of Historic Places (NRHP). The County F alignment redesign was necessary to avoid the Lampson School/Brooklyn Town Hall property. As a result, preliminary slope-intercept limits for the proposed County F grade separation may extend into the north end of the previously identified boundary of Site # 47WB0084.

During design, County F slope-intercept limits adjacent to Site # 47WB0084 will be studied to determine whether the limits are within the boundary of Site # 47WB0084, and if necessary, can be refined to avoid the boundaries of the site. Prior to construction, an archaeology survey will also be completed in the southwest quadrant of the County F grade separation if determined necessary.

7. Identify effects on those sites not avoided in question #4:

Not applicable.

Site # _____ (Complete questions below for each site listed in Question 4, above.)

List any commitments to avoid having an adverse effect. (Also list on the Environmental Commitments Basic Sheet)

- Yes, the adverse effect is unavoidable. Describe the adverse effect:
 - Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?
 - No
 - Project is not Federally funded.
 - Other – Explain: _____
 - Yes - Complete Factor Sheet B-8, Section 4(f) 6(f) or Other Unique Areas (Form DT2077).
 - Property is eligible for NRHP and project will have adverse effect.
 - Other, Explain: _____
 - Has Documentation for Consultation been prepared?
 - No
 - Yes - Complete Question 8

8. Has a Memorandum of Agreement been signed?

Not applicable.

- No – Pending:
Explain - _____
- Yes, attached:
Signatories and dates of signature:
 - ACHP _____

- FHWA _____
- WHS _____
- American Indian Tribes _____

- WisDOT _____
- Other _____

Commitments:

- Data Recovery:
 - Yes Date plan accepted: _____
Prepared by _____
 - No
- Monitoring.
- Other: _____

TRIBAL ISSUES

Factor Sheet B-7

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Summary of Coordination with American Indian Tribes for Cultural Issues (Attach response letters):

American Indian Tribe	Initial Coordination Date	Response Received		Phase I Arch. Report Sent	Phase II Arch. Report Sent	D for C Sent	MOA Sent	Human Remains	Trad. Cultural Properties	Acq. of Tribal Lands
		Yes	No							
Bad River Band of Lake Superior Chippewa Indians of Wis.	2/2008		X							
Forest County Potawatomi Community of Wisconsin	2/2008		X							
Ho-Chunk Nation	2/2008		X							
Iowa Tribe of Oklahoma	2/2008		X							
Lac Courte Oreilles Band of Lake Superior Chippewa Indians	2/2008		X							
Lac du Flambeau Band of Lake Superior Chippewa Indians of Wis.	2/2008	X		X						
Menominee Indian Tribe of Wisconsin	2/2008		X							
Prairie Island Indian Community. Minnesota Mdwakanton Sioux,	NA									
Prairie Band Potawatomi Nation	2/2008	X								
Stockbridge-Munsee Community Band of Mohican Indians	2/2008	X								
Oneida Nation of WI	2/2008		X							
Red Cliff Band of Lake Superior Chippewa Indians	2/2008		X							
Sac & Fox of the Mississippi in Iowa	2/2008		X							
Sac & Fox Nation of Missouri in Kansas and Nebraska	2/2008		X							
Sac & Fox Nation of Oklahoma	2/2008		X							
St. Croix Band of Lake Superior Chippewa Indians	2/2008		X							
Sokaogon (Mole Lake) Band of Chippewa Indians	2/2008		X							

Tribes may have additional concerns, rules and requirements related to non-cultural resource issues. These should be documented on the Environmental Justice Factor Sheet (Factor Sheet B-4) and other appropriate factor sheets (e.g. Stormwater, Historic Resources, Archaeological Sites Sheets).

2. Summary of Issues Identified by Tribes:

Tribe	Date	Issues
Lac du Flambeau Band of Lake Superior Chippewa Indians	3/10/2008	Expressed concerns with any impacts to historic properties located within the project area of potential effect for the project; requested that the Archaeological report be forwarded to the Lac du Flambeau Band.
Stockbridge-Munsee Tribe	3/10/2008	None
Prairie Band Potawatomi Nation	4/23/2008	None

Initial coordination letters describing the project and its location were sent on March 10, 2008; three responses were received. A subsequent letter identifying the Area of Potential Effect (APE) was sent on December 15, 2009; no responses were received. Copies of response letters are included in Appendix H.

3. Archaeological and Historic Structure/Buildings Issues:

Historic Structure/Building Issues:

- No
- Yes Complete Factor Sheet B-5 – Historic Resources Evaluation.

Archaeological Issues:

- No
- Yes Complete Factor Sheet B-6 – Archaeological Sites Evaluation.

4. Human Remains:

Have American Indian remains/burials been reported or encountered during archaeological studies?

- No
- Yes

Consultation dates:

- American Indian Tribe: _____
- SHPO: _____
- Burial Sites Office: _____

Area avoided.

Burials will not be affected.

Burials left in place.

Burials will be affected:

Permission to re-inter from Wisconsin Historical Society Director (date) _____

MOA prepared?

- No
- Yes

Signatories to MOA and dates:

- FHWA: _____
- American Indian Tribe: _____
- WisDOT: _____
- ACHP: _____
- Other _____, _____, _____, _____, _____

Commitments to be included in contract specifications:

All documentation attached:

Project may proceed.

5. Traditional Cultural Property (TCP):

Is a TCP present within the Area of Potential Effect of the project?

- No
- Yes:

Tribal Affiliation:

Type of Property:

- Sacred Place
- Cemetery
- Gathering place
- Place or resource that is significant in tribal traditions

Is there an effect on a TCP?

- No Explain
- Yes:

Steps to avoid impact to the TCP

6. Will lands owned by American Indian tribes be acquired for this project?

- No
- Yes:

Are the lands held in trust for the tribe by the US government?

- No
- Yes, explain.

AESTHETICS EVALUATION

Factor Sheet B-9

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Landscape Characteristics:

a. Identify and briefly describe the visual character of the landscape:

County F: The landscape consists of woodlands, wetlands, and some farmland. The southern end of Silver Lake is located near the northeast quadrant of the proposed US 53/County F grade separation. Rural residential land uses are also located within the County F portion of the project area.

WIS 77: The landscape is a mixture of farmland, woodlands, wetlands, and urban development. Commercial land uses are located adjacent to the proposed US 53/WIS 77 interchange. Services and commercial operations in this area are typical of a small rural town. Rural residential development is located along WIS 77 west of US 53. A higher density of residential land uses are located along WIS 77 east of US 53. US 53 passes over Shell Creek at the northern end of the project area.

County T: The landscape is rural in nature with forested areas, open areas, and wetlands. Rural residential development is located east of US 53, and a commercial business is located at the US 53/Red Lake Road intersection. The Town of Wascott

b. Indicate the visual quality of the view-shed and identify landscape elements which would be visually sensitive:

The existing forested and agricultural landscape adjacent to the US 53 corridor may provide an aesthetically pleasing view for travelers along the highway. Compared to the nature of the rural landscape, some viewers may consider the rural residential uses and commercial development less aesthetically appealing.

2. User/viewer Characteristics:

a. Identify and discuss the viewers who will have a view of the improved transportation facility:

Project Neighbors

Project neighbors are people who own or use property near the proposed grade separations at County F and County T, and the proposed interchange at WIS 77. Project neighbors include those individuals who live or work near the proposed improvements.

b. Identify and discuss users of the transportation facility who will have a view from the facility:

Travelers

Travelers are people who use the existing US 53 corridor and intersecting highways. Travelers include users commuting to/from work, haulers (i.e., people using US 53 and intersecting highways for work, commerce, etc.), and tourists (i.e., people using US 53 and intersecting roadways to travel to/from tourist destinations). Refer to Basic Sheet 6 for a discussion of existing and projected traffic volumes along the project segment of US 53, County F, WIS 77, and County T.

3. Effects:

a. Describe whether and how the project would affect the visual character of the landscape:

The Proposed Action would have a minimal overall effect on the existing visual character of the landscape. The landscape would retain its existing rural nature at County F and County T and more urban nature at WIS 77 (commercial and residential uses). Changes in visual character would be minimal because US 53 is currently a four-lane expressway through the project area. The greatest potential for changes in views would occur at the proposed grade separations at County F and County T, and the proposed interchange at WIS 77. New structures

associated with grade separations and roadways (e.g., WIS 77 interchange ramps, local roadway connections) would be visible from adjacent properties and from the US 53 corridor.

Travelers

New structures and roadways would be visible from the US 53 corridor and intersecting highways (County F, WIS 77, and County T).

b. Indicate the effects the project would have on the viewer groups:

Project Neighbors

New structures and roadways (e.g., WIS 77 interchange ramps, local roadway connections) could be visible from adjacent properties, depending upon the distance from these features. Proposed grade separations at County F and County T, and the proposed interchange at US 53 and WIS 77, would occupy a greater portion of the horizon for property owners and users near these facilities. Property owners and users more distant from County F, WIS 77, and County T are less likely to experience any visual changes because of topography and intervening vegetation (e.g., forested areas).

Travelers

Travelers along US 53 and intersecting highways are likely to experience views similar as those currently experienced along the US 53 corridor as a whole. The proposed grade separations at County F and County T, and the proposed interchange at US 53 and WIS 77, would alter the existing viewshed from US 53 as travelers approach these locations. This is particularly the case at WIS 77 and County T where overpass bridges cross over US 53. However, this effect is expected to be similar to other portions of the US 53 corridor where grade separations are currently in place.

4. Mitigation:

a. Have aesthetic commitments been made?

No
Yes - Discuss:

WETLANDS EVALUATION

Factor Sheet C-1

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Describe Wetlands:

Wetlands located within the general project area at US 53 and County F, WIS 77 and County T are listed in Tables 1 through Table 3 at the end of this Wetlands Evaluation Factor Sheet, and are illustrated in Exhibit 1 through Exhibit 3 in Appendix A.

2. Are any impacted wetlands considered "wetlands of special status" per WisDOT Wetland Mitigation Banking Technical Guideline, page 10?

- No
- Yes:
 - Advanced Identification Program (ADID) Wetlands
 - Other – Describe: _____

3. Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other:

Potential grading and/or fill associated with grade separations and local road connections at US 53 and County F, and US 53 at County T. Potential grading and/or fill associated with interchange construction at US 53 and WIS 77.

4. List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland: (List should include both permanent, migratory and seasonal residents).

A typical suite of common bird species were observed in wetlands during windshield surveys. All wetlands in the project area could provide foraging habitat for geese and dabbling ducks such as mallards, black ducks, teal, northern shovelers, pintails, and gadwalls. Larger lakes, e.g. Silver Lake, provide nesting and foraging habitat for diving ducks and loons. Other typical species include reptiles, amphibians such as frogs and turtles, and small mammals.

5. Federal Highway Administration (FHWA) Wetland Policy:

- Not Applicable - Explain
- Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.
- Statewide Wetland Finding: **NOTE: All three boxes below must be checked for the Statewide Wetland Finding to apply.**
 - Project is either a bridge replacement or other reconstruction within 0.3 mile of the existing location.
 - The project requires the use of 7.4 acres or less of wetlands.
 - The project has been coordinated with the DNR and there have been no significant concerns expressed over the proposed use of the wetlands.

6. Erosion control or storm water management practices which will be used to protect the wetland are indicated on form: (Check all that apply)

- Factor Sheet D-6, Erosion Control Impact Evaluation.
- Factor Sheet D-5, Stormwater Impact Evaluation.
- Neither Factor Sheet - Briefly describe measures to be used

7. U S Army Corps of Engineers (USACE) Jurisdiction - Section 404 Permit (Clean Water Act)

- Not Applicable - No fill to be placed in wetlands or wetlands are not under USACE jurisdiction.
- Applicable - Fill will be placed in wetlands under the jurisdiction of the USACE.

Indicate area of wetlands filled: Total = 2.7 Acres
(0.6 acres at County F; 0.8 acres at WIS 77; 1.3 acres at County T)

Type of 404 permit anticipated:

- Individual Section 404 Permit required.
 General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 Compliance.

Indicate which GP or LOP is required:

- Non-Reporting GP
 Provisional GP
 Provisional LOP
 Programmatic GP (GP-001-WI)

GP or LOP to be determined.

8. Section 10 Waters (Rivers and Harbors Act). For navigable waters of the United States (Section 10) indicate which 404 permit is required:

- No Section 10 Waters.

Indicate whether Pre-Construction Notification (PCN) to the USACE is:

- Not applicable.
 Required: Submitted on: (Date)

Status of PCN

USACE has made the following determination on: (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

9. Wetland Avoidance and Impact Minimization: [Note: Required before compensation is acceptable]

A. Wetland Avoidance:

1. Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.:

- The County F grade separation at US 53 has the least potential wetland impacts of the studied alternatives. The proposed "jug handle" configuration is a non-interchange alternative that avoids the use of wetlands north of County F and requires the least amount of new local road connections. The County F grade separation and County F alignment east of US 53 was designed to avoid fill impacts to Silver Lake.
- The WIS 77 interchange at US 53 has the least wetland impacts of the studied alternatives, avoiding the wetland complex associated with Shell Creek and avoiding wetlands adjacent to US 53 south of the Village of Minong.
- The County T grade separation at US 53 has the least potential wetland impacts of the studied alternatives. The proposed "jug handle" configuration is a non-interchange alternative that avoids the use of wetlands north of County T and substantially minimizes the use of wetlands south of County T compared to other interchange alternatives that were considered.

(See also the alternatives evaluation process in Section 2 of the EA Basic Sheets.)

2. Indicate the total area of wetlands avoided:

Acres: Approximately 20 acres of wetland impacts were avoided based on a summation of the highest impact alternative considered at each location (US 53 at County F, US 53 at WIS 77 and US 53 at County T).

B. Minimize the amount of wetlands affected:

1. Describe methods used to minimize the use of wetlands, such as a steepening of side slopes or use of retaining walls, equalizer pipes, upland disposal of hydric soils, etc.:

Side slopes would be steepened to the extent that safety is not compromised. Medians, where present, would be narrowed to the extent practicable in order to minimize the footprint of the proposed grade separations at County F, WIS 77 and County T. Design of the proposed grade separations at County F, WIS 77, and County

T would incorporate all other standard methods and techniques to minimize wetland impacts in place at that time.

2. Indicate the total area of wetlands saved through minimization:
Acres: Based on current wetland mapping, estimates indicate that approximately 0.25 to 0.6 acre of wetlands were not impacted through techniques used to minimize impacts of the proposed grade separations at County F, WIS 77, and County T.

10. Compensation for Unavoidable Wetland Loss:

According to Section 401 (b) (1), of the Clean Water Act, unavoidable wetland losses must be mitigated on-site, if possible. If no on-site opportunities exist, near/off-site wetland compensation sites must be considered. If neither exists, the losses may be debited to an existing wetland mitigation bank site. Compensation ratios are based on WisDOT Wetland Mitigation Banking Technical Guideline.

	Type	Acre(s) Loss	Ratio	Compensation Type and Acreage			
				On-site	Near/off site	Consolidation Site	Bank site
RPF(N)	Riparian wetland (wooded)						
RPF(D)	Degraded riparian wetland (wooded)						
RPE(N)	Riparian wetland (emergent)						
RPE(D)	Degraded riparian wetland (emergent)						
M(N)	Wet and sedge meadows, wet prairie, vernal pools, fens						
M(D)	Degraded meadow						
SM	Shallow marsh	0.9	TBD		TBD		
DM	Deep marsh						
AB(N)	Aquatic bed						
AB(D)	Degraded aquatic bed						
SS	Shrub Swamp, shrub carr, alder thicket	0.9	TBD		TBD		
WS(N)	Wooded swamp	0.2	TBD		TBD		
WS(D)	Degraded wooded swamp						
Bog	Open and forested bogs	0.7	TBD		TBD		

Potential impacts (acres lost) rounded to the nearest 0.1 acre.

D = Degraded

N = Non-degraded

TBD = to be determined

Wetlands would be delineated during design studies to determine the exact amount of wetland impacts (by wetland type) as a result of the proposed action. Following the wetland delineation and identification of final wetland impacts, a mitigation plan will be developed that will consider plans for potential on-site replacement, compensation acreage, and proposals for debiting any compensatory wetland acreage from a WisDOT wetland mitigation bank site in accordance with provisions of the WisDOT Wetland Mitigation Banking Guidelines Technical Memorandum in place at that time. Final wetland mitigation (on-site replacement, near or off-site, bank site) will be determined based on rules and requirements in place at that time.

11. If on-site compensation is proposed, describe how a search for a compensation site was conducted:

In general, drained hydric soils did not appear to be abundant within the project area; therefore, on-site mitigation does not appear to be practical. However, opportunities for on-site compensation and mitigation will be revisited during design in accordance with rules and regulations in place at that time.

12. Summarize the coordination with other agencies regarding the compensation for unavoidable wetland losses: Attach appropriate correspondence:

Agency coordination will be conducted concerning appropriate wetland mitigation during design and construction based on rules and regulations in place at that time.

**TABLE 1
PROJECT AREA WETLANDS (US 53 AT COUNTY F)**

	Wetland 1 (WF-1)	Wetland 2 (WF-2)	Wetland 3 (WF-3)	Wetland 4 (WF-4)	Wetland 5 (WF-5)	Wetland 6 (WF-6)
Name (If known)	None	Silver Lake (perimeter)	None	None	None	None
Location County	Washburn	Washburn	Washburn	Washburn	Washburn	Washburn
Location (Section-Township-Range)	S2; T40N; R12W (No impacts)	S2; T40N; R12W (No impacts)	S35; T41N; R12W	S35; T41N; R12W	S35; T41N; R12W (No impacts)	S2; T40N; R12W (No impacts)
Location Map	See Exhibit 1, Appendix A	See Exhibit 1, Appendix A	See Exhibit 1, Appendix A	See Exhibit 1, Appendix A	See Exhibit 1, Appendix A	See Exhibit 1, Appendix A
Wetland Type(s)^{(1),(2)}	SS (S3H)	AB(N) (A3L)	Not mapped M (E2K)	Not mapped SS (S2K)	Not mapped SM/M (E2K)	Not Mapped M/RFP (E2K/ T2K)
Total Wetland Loss	Acres 0.0	Acres 0.0	Acres 0.3	Acres 0.3	Acres 0.0	Acres 0.0
Wetland is: (Yes/No/NA)⁽³⁾						
<ul style="list-style-type: none"> Isolated from stream, lake or other surface water body 	Yes	No	No	Yes	Yes	Yes
<ul style="list-style-type: none"> Not contiguous (in contact with) a stream, lake, or other water body, but within 5-year floodplain 	No	No	No	No	No	No
<ul style="list-style-type: none"> If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range 	NA	Silver Lake (S2; T40N; R12W and S35; T41N, R12W)	NA	NA	NA	NA

(1) Use wetland types as specified in the "WisDOT Wetland Mitigation Banking Technical Guideline, Table 3-C"

(2) Wetland types as specified in the Wisconsin Wetland Inventory

(3) If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

**TABLE 2
PROJECT AREA WETLANDS (US 53 AT WIS 77)**

	Wetland 1 (W77-1)	Wetland 2 (W77-2)	Wetland 3 (W77-3)
Name (If known)	None	None	None (complex adjacent to Shell Creek)
Location County	Washburn	Washburn	Washburn
Location (Section-Township-Range)	S22,27; T42N, R12W	S23; T42N, R12W	S23; T42N, R12W (no impacts)
Location Map	See Exhibits 2A & 2B Appendix A	See Exhibits 2A & 2B Appendix A	See Exhibits 2A & 2B Appendix A
Wetland Type(s)^{(1),(2)}	Not mapped WS(N)/M (T2K/E2K)	SS/WS (S3H/ S3K/ T3)	SS/WS (S3H/ S3K/ T8K/ T3)
Total Wetland Loss	Acres 0.2	Acres 0.6	Acres 0.0
Wetland is: (Yes/No/NA)⁽³⁾			
<ul style="list-style-type: none"> Isolated from stream, lake or other surface water body 	Yes	Yes	No
<ul style="list-style-type: none"> Not contiguous (in contact with) a stream, lake, or other water body, but within 5-year floodplain 	No	No	No
<ul style="list-style-type: none"> If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range 	NA	NA	Large wetland complex adjacent to Shell Creek (S23; T42N, R12W)

(1) Use wetland types as specified in the "WisDOT Wetland Mitigation Banking Technical Guideline, Table 3-C"

(2) Wetland types as specified in the Wisconsin Wetland Inventory

(3) If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

**TABLE 3
PROJECT AREA WETLANDS (US 53 AT COUNTY T)**

	Wetland 1 (WT-1)	Wetland 2 (WT-2)	Wetland 3 (WT-3)	Wetland 4 (WT-4)
Name (If known)	None	None	None	None
Location County	Douglas	Douglas	Douglas	Douglas
Location (Section-Township-Range)	S25,36; T43N, R12W	S36; T43N, R12W	S36; T43N, R12W (No impacts)	S25; T43N, R12W (No impacts)
Location Map	See Exhibit 3, Appendix A	See Exhibit 3, Appendix A	See Exhibit 3, Appendix A	See Exhibit 3, Appendix A
Wetland Type(s)^{(1),(2)}	Bog/SS (T8/SK4)	Potential M (E2K) (based on windshield survey)	Not mapped M (E2K)	WS/SS/M (T8K/ S3H/ E2K)
Total Wetland Loss	Acres 0.7	Acres 0.6	Acres 0.0	Acres 0.0
Wetland is: (Yes/No/NA)⁽³⁾				
<ul style="list-style-type: none"> • Isolated from stream, lake or other surface water body 	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Not contiguous (in contact with) a stream, lake, or other water body, but within 5-year floodplain 	No	No	No	No
<ul style="list-style-type: none"> • If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range 	NA	NA	NA	NA

(1) Use wetland types as specified in the "WisDOT Wetland Mitigation Banking Technical Guideline, Table 3-C"

(2) Wetland types as specified in the Wisconsin Wetland Inventory

(3) If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets.
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Stream Name:** Bergen Creek

2. **Stream Type: (Indicate Trout Stream Class, if known)**

- Unknown
- Warm water
- Cold water

If trout stream, identify trout stream classification:

Bergen Creek is classified as a Class II brook trout stream from its headwaters to Leader Lake Road. Downstream of Leader Lake Road, Bergen Creek is classified as a Class III brook trout stream.

Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**

Bergen Creek is part of the Totagatic River Watershed – 329.93 square miles or 211,156 acres (Wisconsin DNR Surface Water Data Viewer)

4. **Stream flow characteristics:**

- Permanent Flow (year-round)
- Temporary Flow (dry part of year)

5. **Stream Characteristics:**

A. Substrate:

- 1. Sand
- 2. Silt
- 3. Clay
- 4. Cobbles
- 5. Other-describe:

B. Average Water Depth: Variable

C. Vegetation in Stream

- Absent
- Present - If known describe: Extensive wetlands are located adjacent to Bergen Creek.

D. Identify Aquatic Species Present: Brook trout, northern pike, white suckers, burbot, minnows

E. If water quality data is available, include this information:

F. Is this river or stream on the WDNR's "Impaired Waters" list?

- No
- Yes - List: _____

6. **If bridge or box culvert replacement, are migratory bird nests present?**

- Not Applicable
- None identified
- Yes – Identify Bird Species present
Estimated number of nests is:

7. **Is a Fish & Wildlife Depredation Permit required to remove swallow nests?**

- Not Applicable
- Yes

No - Describe mitigation measures: If nests are present, construction during the nesting season would be avoided or birds will be excluded from the culvert through the use of netting or other best management practice in place at that the time of project implementation. Active nests (with eggs or young swallows) would not be removed.

8. Describe land adjacent to stream:

Extensive wetlands are located adjacent to Bergen Creek. North of County T at US 53, the wetland types adjacent to an unnamed tributary to Bergen Creek include wooded swamp (forested wetlands; T8K and T2H) and scrub/shrub wetlands (S3K, S3H, and S3/E1K).

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:

An unnamed tributary to Bergen Creek flows from east to west, discharging to Bergen Creek approximately 1.3 miles west of US 53. This unnamed tributary crosses US 53 approximately 800 feet north of the existing County T intersection with US 53.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

An unnamed tributary to Bergen Creek crosses US 53 north of the existing County T intersection as described above. A large wetland complex and floodplain is associated with this tributary to Bergen Creek. The proposed grade separation at US 53 and County T is located approximately 1,200 feet south of the floodplain boundary. No floodplain fill impacts are anticipated.

11. Discuss the effects of any backwater which would be created by the Proposed Action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

New construction would comply with NR 116 requirements. Construction would be planned and built in such a way to comply with local floodplain ordinances.

12. Describe and provide the results of coordination with any floodplain zoning authority:

Flood Insurance Rate Maps (FIRM maps) were used to reference the project area. The proposed grade separation at US 53 and County T is located in the Town of Wascott, Douglas County. Douglas County is the floodplain zoning authority for unincorporated areas in Douglas County.

At the time of design, WisDOT will coordinate any necessary floodplain studies and any changes in flood elevations with WDNR and Douglas County as per NR 116 requirements.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

- No impacts would occur.
- Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- Significant flooding with a potential for property loss and a hazard to life.
- Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

As described in Item #11 above, an unnamed tributary to Bergen Creek and its associated floodplain are located north of the existing County T intersection with US 53. The proposed grade separation of County T at US 53 is located to the south of this intersection. No floodplain fill impacts are anticipated; therefore, the proposed grade separation at County T is not expected to cause any of the impacts described above.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

Floodplain use would remain as wetlands and no impacts are expected to occur.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

Impacts to water quality could occur during construction as a result of erosion from exposed grades and slopes. After establishment of permanent vegetation, the primary impact to water quality would result from stormwater runoff from the impervious pavement surface. See below under Item 16 for a discussion of proposed mitigation measures.

16. Are measures proposed to enhance beneficial effects?

- No
 Yes. Describe:

Erosion control best management practices (BMPs) would be implemented during construction of the Proposed Action, consistent with Trans 401 standards and requirements. These BMPs could include measures such as silt fence, bale checks, temporary sediment basins, inlet protection, and dust abatement, or other WisDOT standard practices in place at the time of project implementation.

The proposed project will include permanent BMPs for stormwater runoff treatment and rate control consistent with Trans 401 standards and requirements in place at the time of design and construction. These BMPs could include grass swales, vegetated filter strips, buffer zones, wet detention basins, infiltration basins or other WisDOT practices in place at the time of design and implementation. These measures will provide a net benefit to water quality and quantity by providing rate attenuation and treatment prior to discharge.

RIVERS, STREAMS AND FLOODPLAINS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-2

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets.
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Stream Name:** Shell Creek

2. **Stream Type: (Indicate Trout Stream Class, if known)**

- Unknown
- Warm water
- Cold water

If trout stream, identify trout stream classification:

Shell Creek is classified as a Class II brook trout stream. A segment of Shell Creek located east of County I is classified as a Class I trout stream (S22, T42N, R12W).

Wild and Scenic River

3. **Size of Upstream Watershed Area: (Square miles or acres)**

Shell Creek is part of the Totagatic River Watershed – 329.93 square miles or 211,156 acres (Wisconsin DNR Surface Water Data Viewer)

4. **Stream flow characteristics:**

- Permanent Flow (year-round)
- Temporary Flow (dry part of year)

5. **Stream Characteristics:**

A. Substrate:

- 1. Sand
- 2. Silt
- 3. Clay
- 4. Cobbles
- 5. Other-describe:

B. Average Water Depth: Variable

C. Vegetation in Stream

- Absent
- Present - If known describe: Extensive wetlands are located adjacent to Shell Creek.

D. Identify Aquatic Species Present: brook trout (east of County I, Shell Creek becomes a warm water fishery supporting walleye, northern pike and panfish)

E. If water quality data is available, include this information:

F. Is this river or stream on the WDNR's "Impaired Waters" list?

- No
- Yes - List: _____

6. **If bridge or box culvert replacement, are migratory bird nests present?**

- Not Applicable
- None identified – Shell Creek crosses under Shell Creek Road through a single culvert. The need for surveys of migratory bird nests will be coordinated with WDNR prior to project implementation. If active nests are present, appropriate mitigation measures would be identified in consultation with the WDNR.
- Yes – Identify Bird Species present
Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?

Not Applicable

Yes

No - Describe mitigation measures: If nests are present, construction during the nesting season would be avoided or birds will be excluded from the culvert through the use of netting or other best management practice in place at that the time of project implementation. Active nests (with eggs or young swallows) would not be removed.

8. Describe land adjacent to stream:

The landscape adjacent to Shell Creek is forested and the stream is bounded by steep slopes. North of Shell Creek Road, the wetland type near the stream is shrub/wooded swamp (T3/S3K).

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:

Shell Creek is a spring-fed and drainage stream that begins southeast of the Village of Minong at Bond Lake (approximately 1.2 miles south of the US 53/Shell Creek Road intersection). Shell Creek flows from east to west, passing through an unnamed spring located approximately 1,200 feet northeast of the US 53/Shell Creek Road intersection. An unnamed pond located along the west side of US 53 discharges to Shell Creek at a point located approximately 0.5 miles northwest of the US 53/Shell Creek Road intersection. Further to the west of the Village of Minong, Pokegama Lake discharges to Shell Creek near County I.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]

The Proposed Action includes the construction of an overpass connecting Shell Creek Road and Business Route 53. Grade changes to Shell Creek Road would extent to the west of US 53 to an existing single culvert crossing of Shell Creek. An existing mapped 100-year floodplain is associated with Shell Creek. The footprint of Shell Creek Road where it currently crosses Shell Creek on the west side of USH 53 would likely be expanded and the existing single culvert would be replaced. Construction of the proposed action could include excavation and some fill adjacent to Shell Creek Road at the Shell Creek crossing. If it is determined during design that Shell Creek Road is raised and/or widened at Shell Creek, a hydraulic and hydrologic (H & H) study would be conducted to ensure that these impacts and any replacement culvert would be properly sized and would not increase backwater flood elevations. WisDOT will design and reconstruct this Shell Creek crossing to provide flow conditions that are the same or better than the current conditions. Design and H & H study findings would be coordinated with the WDNR and local units of government as per NR 116 requirements.

11. Discuss the effects of any backwater which would be created by the Proposed Action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

No backwater is expected to be created at Shell Creek as a result of the Proposed Action. WisDOT will design the Shell Creek crossing to maintain flow conditions that are the same or better than the existing conditions at the Shell Creek Road crossing of Shell Creek. New construction would comply with NR 116 requirements. Construction would be planned and built in such a way to comply with local floodplain ordinances.

12. Describe and provide the results of coordination with any floodplain zoning authority:

Flood Insurance Rate Maps (FIRM maps) were used to reference the project area. Floodplain zoning authorities within the project limits are listed below.

- Washburn County (floodplain zoning authority for all unincorporated areas within 1,000 feet of a navigable body of water) (Silver Lake)
- Village of Minong (floodplain zoning authority for lands adjacent to Shell Creek)

At the time of design, WisDOT will coordinate floodplain studies and any changes in flood elevations with WDNR, Washburn County and the Village of Minong as per NR 116 requirements.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?

- No impacts would occur.
- Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- Significant flooding with a potential for property loss and a hazard to life.
- Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

To be determined with future design studies. If Shell Creek Road is raised or widened at Shell Creek, a hydraulic and hydrologic (H & H) study may need to be conducted to ensure that the culvert would be properly sized and would not increase backwater flood elevations. Details of the culvert design would be developed after further consultation with WDNR.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

Floodplain use would remain as wetlands and no impacts are expected to occur.

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

Impacts to water quality could occur during construction as a result of erosion from exposed grades and slopes. After establishment of permanent vegetation, the primary impact to water quality would result from stormwater runoff from the impervious pavement surface. See below under Item 16 for a discussion of proposed mitigation measures.

16. Are measures proposed to enhance beneficial effects?

- No
- Yes. Describe:

Erosion control best management practices (BMPs) would be implemented during construction of the Proposed Action, consistent with Trans 401 standards and requirements. These BMPs could include measures such as silt fence, bale checks, temporary sediment basins, inlet protection, and dust abatement, or other WisDOT standard practices in place at the time of project implementation.

The proposed project will include permanent BMPs for stormwater runoff treatment and rate control consistent with Trans 401 standards and requirements in place at the time of design and construction. These BMPs could include grass swales, vegetated filter strips, buffer zones, wet detention basins, infiltration basins or other WisDOT practices in place at the time of design and implementation. These measures will provide a net benefit to water quality and quantity by providing rate attenuation and treatment prior to discharge.

LAKES OR OTHER OPEN WATER EVALUATION
(Lakes, Ponds, Impoundments, Flowages, etc.)

Factor Sheet C-3

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Name of Lake or Water body:** Silver Lake

2. **Location of Lake or Water body:**
Section-Township-Range: S 35, T 41N, R 12W
Township Name: Brooklyn

3. **Lake or Water body Type:**

- Lake
- Pond
- Bog
- Impoundment
- Flowage
- Other – Describe:

4. **Area of Water body:**

Acres: 188

5. **Hydrologic characteristics:**

- Permanent (year-round)
- Temporary (dry part of year)

6. **Lake or Water body Characteristics:**

Substrate:

- Sand
- Silt
- Clay
- Cobbles
- Other - Describe unknown

Maximum Depth:

- Feet 28

Vegetation in Lake or Water body:

- Absent
- Present - If known – Describe:

7. **Identify Aquatic Species Present:**

Silver Lake is a clear water, seepage lake containing a warm water fishery of primarily walleye, northern pike, largemouth bass, and panfish.

8. **If water quality data is available, include this information: (e.g., DNR or local discharger might have such records)**

Based on water monitoring data collected by the DNR's Citizen Lake Monitoring Network in 2012, Silver Lake's overall Trophic State Index (TSI) was 47. TSI is a measure of water clarity. Silver Lake's TSI measurement suggests that the water in Silver Lake was mesotrophic, or moderately clear.

9. If bridge or box culvert replacement, are migratory bird nests present?

- Not applicable
 None identified
 Yes – Identify bird species present: _____
Estimated number of nests is: _____

10. Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?

- Not Applicable.
 Yes.
 No - Describe mitigation measures:

11. Describe land adjacent to lake or water body:

The land adjacent to the lake that would be affected by the project is partially forested with some development to the southeast and agricultural use south of Silver Lake. An inland open fresh water wetland (aquatic bed, A3L) is located along the southwestern perimeter of the lake adjacent to County F.

12. Describe proposed work in, over, or adjacent to lake or water body;

The Proposed Action would construct a County F underpass beneath US 53 west of Silver Lake. County F would be widened and an intersection will be constructed to provide access to and from US 53 and Birchwood Drive adjacent to the southern perimeter of the lake. County F has been designed to avoid fill impacts to Silver Lake.

13. Discuss probable direct impacts to water quality in the water body, both during and after construction. Indicate the probable effects on plants and animals inhabiting or dependent upon the lake or water body:

Impacts to water quality could occur during construction as a result of erosion from exposed grades and slopes. In addition, the vegetative buffer along the north side of County F adjacent to Silver Lake functions to filter pollutants and absorb stormwater prior to reaching the lake. This vegetative buffer could potentially be removed or diminished with construction of the proposed County F grade separation at US 53. Following construction and after permanent vegetation is established, the primary impact to water quality would come from stormwater runoff from existing and additional impervious surfaces, and the traffic-related pollutants associated with this stormwater runoff. Deicing agents (e.g., chlorides) used on the pavement surface could also affect vegetation in the immediate vicinity of the paved surface.

Because the majority of the project will direct stormwater runoff to locations for best management treatment practices prior to discharge (see discussion under Item 14 below), the Proposed Action is not anticipated to have a substantial impact on the water quality of Silver Lake and associated plants and animals.

A relatively narrow floodplain is located along the shoreline of Silver Lake to the northeast of the proposed grade separation at US 53 and County F. The Proposed Action includes the reconstruction of County F to the east of US 53 along the southern shoreline of Silver Lake, with most widening occurring south of the existing roadway. Reconstruction of this segment of County F along the south shoreline of Silver Lake could result in a minor longitudinal floodplain encroachment. If it is determined during design that fill would be placed within this floodplain, WisDOT would coordinate with WDNR regarding potential fill impacts. WisDOT would conduct a floodplain assessment, consistent with NR 116 requirements (Wisconsin's Floodplain Management Program), to determine if these impacts would result in a change to the flood elevations of Silver Lake.

14. Are measures proposed to enhance beneficial effects:

- No.
 Yes

The proposed County F grade separation at US 53 will be designed to meet Trans 401 stormwater standards in place at the time of final design activities. Construction site erosion and sediment control would be part of the project's design and construction as set forth in Trans 401 and the WisDOT/WDNR Cooperative Agreement. Erosion control measures implemented during construction would conform to the standard specifications listed in WisDOT's Standard Specifications for Highway and Structures Construction. Construction Best Management Practices (BMPs) could include silt fence, bale checks, temporary sediment basins, and dust abatement. Grass swales, vegetated filter strips, buffer zones, and detention basins incorporating infiltration could be incorporated as BMPs into the project design to manage storm water runoff and maintain/improve water quality on a permanent basis. The final determination of erosion control BMP measures will be identified closer to design and construction.

GROUNDWATER, WELLS AND SPRINGS EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-4

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Groundwater Protection Elements in Comprehensive Land Use Planning and Transportation:

A. Is project located in an area that has or is developing a:

Groundwater Plans, Programs and Ordinances	Yes	No
WDNR Approved Well Head Protection Plan	x	
WDNR Source Water Assessment	x	
Groundwater Management Plan	x	
Ordinance to protect wells, aquifers or sensitive groundwater recharge zones?		x
Wisconsin Groundwater Guardian Community Program		x

If yes, explain and describe future coordination needs for each category, above:

WDNR Approved Well Head Protection Plan:

The Village of Minong (Minong Waterworks) has a wellhead protection plan for well 1 (BH202) and well 2 (AU062) within the municipal water system. Communications with Village of Minong staff established that the municipal wells are located outside the proposed construction limits and that the wellhead protection area extends to a 1,000 foot radius around the two wells. Although the wells are located outside the proposed construction limits, the construction limits are located within the 1,000 foot wellhead protection area.

WDNR Source Water Assessment:

A WDNR Source Water Assessment has been developed for Minong Waterworks (Public Water Supply ID 86603033, date of assessment May 17, 2011). According to the WDNR Source Water Assessment for Minong Waterworks "[t]he Minong Waterworks system is susceptible to contamination by volatile organic compounds (VOCs) and nitrate. The system has moderate susceptibility to contamination by synthetic organic compounds (SOCs) and microbes. The system has low susceptibility to ethylene dibromide (EDB) and inorganic compounds (IOCs)."

Groundwater Management Plan

The *Land and Water Resource Management Plan for Douglas County, WI* (Review Draft September 2009) was developed to serve a ten-year period from 2010 through 2020. According to this plan, groundwater is the primary source of drinking water for most Douglas County residents. Because of sandy soils and shallow depth to groundwater, and shallow well depths, groundwater in Douglas County is susceptible to some types of contamination,

See Item E below for a discussion of future coordination needs for the categories listed above.

B. Will project location, or likely infrastructure, construction method or stormwater management practices encroach upon or affect protected areas or well locations resulting in non-compliant Plans or wells? Note, there are minimum separation distance requirements for wells, springs, depth to bedrock, and karst features in State Codes (see NR 151, Trans 401, NR 809, NR 811, and NR 812)?

No - Explain why: Both of the Village of Minong's municipal wells are located more than 400 feet from the proposed construction limits at US 53 and WIS 77. However, construction limits are located within the 1,000-foot wellhead protection area associated with these wells. Storm water management measures will be identified during design consistent with regulations and Trans 401 requirements in place at that time. If a permanent infiltration system is identified during design, additional studies would be conducted in accordance with Trans 401 requirements to determine groundwater elevation and flow.

Yes - Explain why:

C. Does the proposed alternative conflict with items described in A, above?

No - Explain why:

Yes - Explain why:

D. Have the local units of Government, businesses or property owners been notified of potential conflicts with items described in A or B?

No (further coordination and review will be completed during design)

Yes - Explain:

E. How will the project avoid, minimize or mitigate potential impacts?

Stormwater treatment best management practices will be identified during design, consistent with regulations and Trans 401 requirements in place at that time. WisDOT will coordinate with the Village of Minong and WDNR to discuss stormwater treatment for the proposed project, any potential effects on groundwater and water supplies, and whether any mitigation measures (e.g., lining stormwater ponds) should be identified.

2. Identification and Inventory of Wells:

A. Identify wells located within existing and proposed right of way of proposed alternative and provide date of well inventory survey (___/___/___):

<u>Well Category</u>	<u># in existing ROW</u>	<u># in proposed ROW</u>
Private Potable Wells	___	___
Municipal High Capacity Wells	___	___
Industrial or Agricultural Wells	___	___
Community Shared Wells	___	___
Groundwater Monitoring Wells	___	___
Research Monitoring Wells	___	___
Free flowing or artesian Wells	___	___
Other (describe)	___	___

A well inventory survey will be completed during design and prior to construction of the project. Any identified wells affected by the project will be sealed and abandoned following State codes and rules in place at the time of project construction.

B. Will the proposed alternative interfere or damage well locations or use? Is there potential for physical damage to the wells, alteration of pumping capacity, or degradation of water quality produced from the wells?

Not applicable.

C. Identify the number and type of wells that will likely need to be abandoned and describe how that will be coordinated and who will be responsible to abandon the wells per State code? This must be listed as an environmental commitment.

If any wells are discovered during construction of the project, these wells will be abandoned and sealed. WisDOT will be responsible for sealing these wells in accordance with Wisconsin Administrative Code NR 811 and NR 812.

3. Identification and Inventory of Springs:

A. Are there known springs in or adjacent to the proposed project limits?

None identified

Yes, explain how many and describe characteristics and location of springs:

An unnamed spring pond is located approximately 1,300 feet northeast of the US 53 intersection with Shell Creek Road, north of Minong (S23, T42N, R12W) (Source: Wisconsin Department of Natural Resources, Surface Water Data Viewer, <http://dnrmaps.wi.gov/imf/imf.jsp?site=SurfaceWaterViewer>). This spring pond feeds Shell Creek, which flows west/northwest through the project area towards Pokegama Lake and through Rice Lake, before entering the Totogatic River. Shell Creek crosses US 53 approximately 1,200 feet northeast

of the existing Shell Creek Road intersection with US 53, and crosses Shell Creek Road at a point located approximately 500 feet west of US 53.

- B. Is there a spring critical for an outstanding resource water (ORW), exceptional resource water (ERW), a cold-water fishery (trout stream), a sensitive aquatic habitat, a calcareous fen, a wetland, or other outstanding natural resources and endangered species?

None identified

Yes - How many and explain:

Shell Creek is a spring fed and drainage stream that begins at Bond Lake east of the Village of Minong. Shell Creek is classified as a Class II brook trout stream and an outstanding resource water (ORW). West of the Village of Minong to County I, a segment of Spring Creek is classified as a Type I trout stream and exceptional resource water (ERW).¹ At County I west of Minong, Shell Creek becomes a warmwater fishery.

- C. Will the proposed alternative and likely grade changes, stormwater management practices, or construction methods affect a spring location, flow rate, or water chemistry (e.g., blasting, filling, cut-sections, drain pipes, structure placement, driving foundation footings or cofferdams, reducing infiltration to spring, etc)?

No

Yes - Explain (temporary or permanent affect?):

The proposed Shell Creek Road overpass over US 53 is not anticipated to affect spring location, flow rate or water chemistry. The proposed Shell Creek Road overpass is located within existing highway right of way and would not substantially increase the amount of impervious surface compared to the existing at-grade crossing of US 53. Best management practices (BMPs) for the treatment of stormwater runoff will be identified during design, based on Trans 401 requirements and other applicable rules and regulations in place at that time. See also Factor Sheet C-2 (Rivers, Streams, and Floodplains Evaluation) regarding the Shell Creek Road culvert crossing of Shell Creek.

- D. Describe coordination with the WDNR, Federal Resource Agencies, and local Government or other interest groups. How will spring impacts be avoided, minimized or mitigated?

The proposed action avoids the unnamed spring east of US 53, adjacent to Shell Creek (the proposed Shell Creek overpass over US 53 is located more than 1,000 feet to the southwest of the spring). The project will also not substantially increase impervious surface and BMPs will be identified during design for the treatment of runoff as described above.

4. Groundwater Flow Conditions, Changes and Potential Impacts:

- A. Are there likely construction de-watering needs?

No

Yes - Explain duration of de-watering and likely pumping rates:

The preferred alternative at County F includes maintaining US 53 at its present location and grade and constructing County F as an underpass. Depth to groundwater in the area of the proposed County F grade separation varies from approximately 20 feet to approximately 50 feet (Washburn County Comprehensive Plan, 2004, Preliminary Final Draft, Map 5-8, Depth to Water Table – Washburn County).

If temporary dewatering is necessary during project construction, the appropriate applications from WDNR will be obtained. The duration of any de-watering, if necessary and likely pumping rates, will be identified during design activities.

- B. Will construction dewatering affect known groundwater contamination migration from leaking underground storage tanks or pumps islands at gasoline service stations or other contaminated properties?

No

Yes - Explain:

There are no gasoline service stations near the proposed County F grade separation. There are no known leaking underground storage tanks (LUST) sites of known groundwater contamination near the proposed County F grade separation.

¹ Wisconsin Department of Natural Resources. 2010. Wisconsin Department of Natural Resources Web Page (online). Wisconsin DNR Surface Water Data Viewer accessed 2010-12-08 at <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer>.

A gasoline service station is located in the northwest quadrant of the proposed WIS 77 interchange. Several closed LUST sites are located east of the project area along WIS 77 in the Village of Minong.

There are no gasoline service stations near the proposed County T grade separation. Two closed LUST sites (petroleum contaminated soils) are located near the proposed County T grade separation; however, there is no known groundwater contamination associated with these sites.

- C. Will there be a need to consider alternative highway design (exception to standards) or construction methods to avoid, minimize or mitigate groundwater flow impacts?

Not applicable.

Factor Sheet C-5

Alternative Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets.
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

1. Proposed Work in Upland Areas:

A. Describe the nature of proposed work in the upland habitat area (e.g., grading, clearing, grubbing, etc.):

County F, WIS 77, and County T: Grade separation and interchange construction; upland clearing, grading, and grubbing.

2. Vegetation/Habitat:

A. Give a brief description of the upland habitat area. Include prominent plant community(ies) at the project site (list vegetation with a brief description of each community type if more than one present).

Non-Native Grassland/ Forbland: This cover type was a mixture of actively pastured land and fallow row-cropped land. Dominant species include smooth brome (*Bromus inermis*), horseweed (*Conyza canadensis*), spotted knapweed (*Centaurea maculosa*), Canada goldenrod (*Solidago canadensis*), fescue (*Festuca* spp.), and Kentucky bluegrass (*Poa pratensis*).

Pine Plantation: Commercial plantings of mostly red pine (*Pinus resinosa*) are located within the vicinity of WIS 77 and County T.

Disturbed, Second Growth, Young to Sub-Mature Mixed Pine/ Oak Forest: Scattered remnants are scattered throughout the three proposed improvement areas at County F, WIS 77 and County T. Disturbances typically are past selective logging, fragmentation, and residential development. Dominant tree and sapling species include jack pine (*Pinus banksiana*), red pine (*P. resinosa*), red oak (*Quercus rubra*), white oak (*Q. alba*), birch (*Betula papyrifera*), and aspen (*Populus* spp.). Sub-dominant herbaceous species include poverty oats grass (*Danthonia spicata*), bracken fern (*Pteridium aquilinum*), and little bluestem (*Schizachyrium scoparium*).

B. Will the project result in changes in the vegetative cover of the roadside?

Changes in vegetative cover are expected within footprint of the proposed County F grade separation, WIS 77 interchange, and County T grade separation. Existing vegetation within the project footprint areas will be converted to transportation uses (e.g., highway right of way). A majority of the vegetation/habitat impacted by the proposed project consists of mixed pine/oak forest. Non-native grasslands are generally located near the southeast quadrant of the proposed County F grade separation and the southwest quadrant of the proposed WIS 77 interchange. There is an abundance of similar upland forest, pine plantation, and non-native grassland within the project area.

Three relatively small pine stands, commercial plantings dominated by red pine, are located south of WIS 77 and west of the proposed interchange. The proposed WIS 77 interchange ramps are located to the east of this pine stand, and would not impact this plant community. A proposed local road connection would provide access to/from properties in the southwest quadrant of the proposed WIS 77 interchange. This local road connection would also avoid direct impacts to this pine stand.

Two pine stands, commercial plantings dominated by red pine, are located near the proposed County T grade separation: 1) west of US 53 between County T and Leader Lake Road; and 2) west of US 53 along the south side of County T. The proposed County T grade separation would impact approximately 0.8 acres of this community along the north side of County T and approximately 0.3 acres along the south side of County T as the proposed alignment matches the existing roadway alignment.

3. Wildlife:

A. Identify and describe any observed or expected wildlife associations with the plant community(ies) listed in question #1:

Common large mammals in the project areas include white-tailed deer and black bear. Uncommon large mammals potentially migrating through the project areas include the timber wolf and mountain lion. Common game birds within the project areas are ruffed grouse and wild turkey. A large diversity of small mammals and songbirds occupy habitats within the project area.

- B. Identify and describe any known wildlife or bird use areas or movement corridors that will be severed or affected by the proposed action:

No important bird use areas are known from the project areas. No important wildlife movement corridors will be severed as a result of the proposed interchange improvements.

- C. Discuss other direct impacts on wildlife and estimate significance:

Vegetated land cover that will be cleared as a result of the proposed action is currently edge habitat. Forested habitat acreage to be cleared is relatively minor compared to similar habitat near the proposed grade separations.

- D. Identify and discuss any probable indirect impacts on wildlife in the area expected due to the project:

The proposed interchange improvements will not present any additional barriers to wildlife movement nor will the reconfigured traffic flow result in higher wildlife mortality compared to current conditions.

- E. Describe measures to avoid and/or minimize adverse effects or to enhance beneficial effects:

The proposed project design incorporates the use of existing roads to the extent practicable in order to minimize the acreage of upland habitat clearing. Proposed road width was kept to a minimum footprint by narrowing medians and steepening side slopes to the extent that motorist safety would not be compromised.

THREATENED AND ENDANGERED SPECIES EVALUATION

Wisconsin Department of Transportation

Factor Sheet C-7

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
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Preferred
 Yes No None identified

1. Are there any known threatened or endangered species in the vicinity of the project?

- None identified
 Yes - Identify the species and indicate its status on Federal or State lists: Documented occurrences of threatened or endangered species and species of special concern are listed below.

Species Common Name	Species Scientific Name	Federal Status	State Status ⁽¹⁾	Affected by Project? Y/N ⁽²⁾
Plants				
Fassett's locoweed	<i>Oxytropis camperstris var. characea</i>	Threatened	Endangered	N
Deam's Rockcress	<i>Arabis missouriensis var. deamii</i>	Not listed	Special Concern	Y
Prairie Sagebrush	<i>Artemisia frigida</i>	Not listed	Special Concern	Y
Northern Yellow Lady's Slipper	<i>Cypripedium parviflorum var. makasin</i>	Not listed	Special Concern	Y
Animals				
Bald Eagle ⁽³⁾	<i>Haliaeetus leucocephalus</i>	Delisted 2007	Special Concern	Y
Canada lynx	<i>Lynx Canadensis</i>	Threatened	Special Concern	N
Gray wolf	<i>Canis lupus</i>	Delisted 2012	Special Concern	Y
Kirtland's warbler	<i>Dendroica kirtlandii</i>	Endangered	Special Concern	N
Northern Goshawk	<i>Accipiter gentilis</i>	Not listed	Special Concern	Y
Piping plover	<i>Charadrius melodus</i>	Endangered, Critical Habitat Designated	Endangered	N
Osprey	<i>Pandion haliaetus</i>	Not listed	Special Concern	Y
Reptiles				
Blanding's turtle	<i>Emydoidea blandingii</i>	Not listed	Threatened	N

(1) Wisconsin Natural Heritage Working List

(2) Species that have the potential to be present within the project area. See discussion below.

(3) Protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Act

2. Explain How a Species Is or Is Not Affected by the Action:

- Species Not Affected:

Impacts to Fassett's locoweed, Canada lynx, and Piping Plover are not anticipated within the proposed project area due to lack of suitable habitat. In addition, no known resident populations of the Canada lynx are known to exist in Wisconsin. The action area for the proposed project consists primarily of previously developed areas in the Town of Brooklyn, Town of Wascott, and Village of Minong. Overall land use is residential, commercial, and agricultural, with small forested areas and a culvert crossing at Shell Creek.

According to information from the US Fish & Wildlife Service (USFWS), Washburn County and Douglas County are within the distribution range of Kirtland's warbler, a federally endangered species. Kirtland's warblers nest in only young jack pine stands (5 to 20 feet tall and 6 to 22 years old, USFWS, Kirtland's warbler Fact Sheet, revised January 2012), preferring to nest in forests that are 80 acres in size or larger with numerous, small grassy openings (USFWS Species Profile, <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B031#crithab>). Pine stands (commercial pine plantings dominated by red pine) are located within the vicinity of the proposed WIS 77 interchange and County T grade separation. Proposed improvements at WIS 77 would not impact these adjacent pine stands. Proposed improvements at County T would convert approximately 1.1 acres of a pine stand adjacent to existing County T to highway right of way (see Upland Habitat factor sheet). Jack pine habitat areas described above are not located within the immediate vicinity of the proposed project. If necessary, consultation would occur closer to design

and construction to determine the presence of Kirtland's warbler and/or critical habitat in the area of influence of the proposed project.

The WDNR has indicated that Blanding's turtles have previously been surveyed near the Crotty Lake area. However, Crotty Lake is located approximately 1.5 miles from the project area.

Species Affected:

According to information from WDNR, bald eagle nests have been previously surveyed near Silver Lake and Shell Creek. The bald eagle was removed from the federal list of threatened and endangered species in 2007; however, the bald eagle is a species of special concern in Wisconsin. Bald eagles are also protected under the Bald and Golden Eagle Protection Act and Migratory Bird Protection Act. Consultation with USFWS and WDNR would occur closer to design and construction, including surveys for bald eagle nests. If bald eagle nests are identified within the project area, the appropriate best management practices as recommended by WDNR would be implemented (e.g., land clearing and tree removal within a specified distance of the eagle nest, avoidance of disturbance within the nesting season – see recommendations identified in WDNR correspondence dated April 17, 2008 in Appendix F).

The Final Rule to remove Endangered Species Act protection for gray wolves in the Western Great Lakes Distinct Population Segment (DPS) took effect in January 2012 (<http://www.fws.gov/midwest/wolf/delisting/index.htm>). Wisconsin currently classifies the gray wolf as a species of special concern. According to the WDNR, the Chain Lake Wolf Pack has been surveyed near the County T/US 53 intersection area. Consultation with WDNR would be conducted closer to design and construction to determine the presence of the gray wolf within the project area. If the gray wolf is identified within the project area, the appropriate mitigation measures as recommended by WDNR would be implemented.

Osprey nests have been previously surveyed near Bergen Creek. Bergen Creek is located to the northwest of the County T grade separation at US 53. An unnamed tributary connected to Bergen Creek and associated wetlands and floodplains are located approximately 500 feet north of the existing US 53/County T intersection. Consultation with WDNR, including surveys for potential osprey nesting locations, would be completed closer to design and construction. If osprey nests are identified within the project area, appropriate mitigation measures as recommended by WDNR would be implemented.

Prairie Sagebrush and Deam's Rockcress have been previously surveyed along portions of the Wild Rivers Trail. The proposed County T grade separation at US 53 terminates to the west of the Wild Rivers Trail at Town Hall Road. Northern Yellow Lady's Slipper is found in fens, calcareous swales, and rich springy forest edges. Northern Goshawks prefer mature deciduous, coniferous, or mixed forest types found in the northern Wisconsin. Northern Yellow Lady's Slipper and Northern Goshawks have been previously surveyed near US 53. Consultation with WDNR would be completed during design to determine the presence of these species within the project area. If these species and/or critical habitat are identified, measures to avoid or minimize impacts would be applied. If avoidance or minimization is not possible, the appropriate mitigation measures as recommended by WDNR would be implemented.

Describe Coordination:

U.S. Fish & Wildlife Service:

Has Section 7 coordination been completed?

No

Yes - Describe mitigation required to protect the federally listed endangered species:

Consultation with the USFWS would occur closer to design and construction to determine the need for surveys for endangered or threatened species and/or critical habitat in the area of influence of the proposed action, based on the list of protected species in Washburn and Douglas counties in place at that time. If necessary, a Biological Assessment could be conducted to determine if the proposed action is likely to adversely affect species or critical habitat, and formal consultation would be initiated to determine appropriate mitigation measures.

WDNR

Has coordination with DNR been completed?

No

Yes - Describe mitigation required to protect the state-listed species:

Early coordination with WDNR was completed as part of the current project development process. See WDNR correspondence in Appendix F. Consultation with WDNR would occur closer to design and construction to determine the presence of protected species. If necessary, measures to avoid or minimize impacts would be applied. If avoidance or minimization is not possible, the appropriate mitigation measures as recommended by WDNR would be implemented.

CONSTRUCTION STAGE SOUND QUALITY EVALUATION

Wisconsin Department of Transportation

Factor Sheet D-2

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

1. Identify and describe residences, schools, libraries, or other noise sensitive areas near the proposed action and which will be in use during construction of the proposed action. Include the number of persons potentially affected:

Current Proposed Project (Official Mapping)

Official mapping of the proposed grade separation at US 53 and County F, the proposed interchange at US 53 and WIS 77, and the proposed grade separation at US 53 and County T would not result in any temporary construction noise impacts.

Future Proposed Project (Future Project Construction)

Some residential homes and/or property owners may be temporarily affected by noise during future project construction. Those homes in close proximity to the proposed grade-separated crossings at County F and County T, and proposed interchange at WIS 77, could expect to be most affected. Northwood School is located approximately 1.3 miles south of the proposed grade separation at US 53 and County T and is therefore not anticipated to be affected by noise during future project construction.

The construction activities associated with implementation of the proposed project may result in increased sound levels relative to existing conditions. The areas that will experience temporary construction sound impacts are located adjacent to the proposed grade-separated crossings at County F (Town of Brooklyn) and County T (Town of Wascott), and the proposed WIS 77 interchange in the Village of Minong.

Land uses adjacent to the proposed grade separations at County F and County T consist of primarily rural and rural residential uses. Land uses adjacent to the proposed interchange at WIS 77 consist of primarily commercial, residential, and agricultural uses.

Residential land uses are located adjacent to the proposed grade separations at County F and County T and proposed interchange at WIS 77. Assuming each residence includes a family of four, there could be approximately 148 people affected by construction noise. The number of people potentially affected by construction noise at each grade separation location and the proposed interchange at WIS 77 are tabulated below.

	Number of Residences Adjacent to Proposed Improvements	Number of Persons Potentially Affected ⁽¹⁾
County F	7	28
WIS 77 ⁽²⁾	21	84
County T	9	36
	TOTAL	148

⁽¹⁾ Assumes each residence includes a family of 4.

⁽²⁾ Includes the proposed WIS 77 interchange and Shell Creek Road overpass.

2. Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels:

The noise generated by construction equipment will vary greatly, depending on equipment type/model/make, duration of operation and specific type of work effort. However, typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet. See Table 1 below (Factor Sheet D-2, page 2 of 2) for construction equipment sound levels.

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects. Check all that apply:

- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to _____ P.M. until _____ A.M.
- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to _____ P.M. until _____ A.M.
- Special construction stage noise abatement measures will be required. Describe:

To reduce the potential impact of construction noise, the special provisions for this project will require that motorized equipment shall be operated in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. All motorized construction equipment will be required to have mufflers constructed in accordance with the equipment manufacturer's specifications or a system of equivalent noise reducing capacity. It will also be required that mufflers and exhaust systems be maintained in good working condition, free from leaks and holes.

**TABLE 1
CONSTRUCTION EQUIPMENT SOUND LEVELS**

Distance from Construction Site (feet)	Range of Typical Noise Levels (dBA) ⁽¹⁾
25	82-102
50	75-95
100	69-89
200	63-83
300	59-79
400	57-77
500	55-75
1,000	49-69

⁽¹⁾ Point sources = 6 dBA reduction per doubling of distance.
Source: EPA and WisDOT.

TRAFFIC NOISE EVALUATION

Factor Sheet D-3

Alternative:
Preferred Alternative for US 53 at County F, WIS 77, and
County T

Total Length of Center Line of Existing Roadway: Varies
Length of This Alternative:
See Preferred Alternative descriptions in basic sheets

Preferred

Yes No None Identified

1. Need for Noise Analysis:

- A. Is the proposed action considered a Type I project? (A Type I project is defined as a project that involves construction of a roadway on new location or the physical alteration of an existing highway which substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes).
- No – Complete only Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation.
- Yes – Complete Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation, and the rest of this sheet.

2. Traffic Data:

- A. Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on Basic Sheet 6, Traffic Summary Matrix:
- No
- Yes – Indicate volumes and explain why they were used:

Automobiles Veh/hr
Trucks Veh/hr
Or Percentage (T)

- B. Identify and describe the noise analysis technique or program used to identify existing and future sound levels: (See attached receptor location maps as Exhibit 4, Exhibit 5A, Exhibit 5B and Exhibit 6 in Appendix A). A receptor location map must be included with this document.

Existing (year 2010) and future (year 2030) sound levels were predicted using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM), Version 2.5 (February 2004) (Serial # 65265).

- C. Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic sound: See attached receptor location maps – Exhibit 4, Exhibit 5A, Exhibit 5B and Exhibit 6 in Appendix A.

Sensitive receptors within the project area located at US 53 and County F, US 53 and WIS 77, and US 53 at County T include single-family residences and commercial businesses. Northwood School is located along the west side of US 53, approximately 1.3 miles south of County T. Modeled receptor locations are identified in Exhibit 4 (County F), Exhibit 5A (WIS 77), Exhibit 5B (WIS 77) and Exhibit 6 (County T) in Appendix A.

- D. If this proposal is implemented will future sound levels produce a noise impact?

- No
- Yes - The impact will occur because:
- The Noise Abatement Criteria (NAC) is approached (1 dBA less than the NAC) or exceeded.
- Existing sound levels will increase by 15 dBA or more.

- E. Will traffic noise abatement measures be implemented?

- Not applicable – Traffic noise impacts will not occur.
- No – Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes. **A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THE FINAL ENVIRONMENTAL DOCUMENT.**
- Yes – Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures which are proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented:

US 53 at County F								
Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.)	Number of Families or People Typical of this Receptor Site	Sound Level L_{eq} ¹ (dBA)			Impact Evaluation		
			Noise Abatement Criteria ² (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)	Impact ³ or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
US 53 at County F modeled receptor locations ⁴								
CTHF_1	1,030 ft	1	67	46	44	2	-21	N
CTHF_2	125 ft	0	72	60	59	1	-12	N
CTHF_3	650 ft	1	67	55	50	5	-12	N
CTHF_4	1,010 ft	1	67	51	48	3	-28	N
CTHF_5	860 ft	1	67	53	51	2	-14	N
CTHF_6	190 ft	1	67	59	58	1	-8	N
CTHF_7	950 ft	1	67	52	50	2	-15	N
CTHF_8	1,070 ft	1	67	NA	55	NA	NA	NA
CTHF_9	460 ft	0	72	56	53	3	-16	N

NA = not applicable because the modeled receptor location would be a residential acquisition as a result of the Proposed Action.

¹ Use whole numbers only.

² Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.

³ An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is -1 db or greater). I = Impact, N = No Impact.

⁴ Approximate distance from the modeled receptor location to the near lane of US 53 (unless otherwise noted).

US 53 at WIS 77

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.)	Number of Families or People Typical of this Receptor Site	Sound Level L _{eq} ¹ (dBA)			Impact Evaluation		
			Noise Abatement Criteria ² (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)	Impact ³ or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
US 53 at WIS 77 modeled receptor locations ⁴								
STH77_1	80 ft	1	67	60	61	1	-7	N
STH77_2	85 ft	1	67	59	61	2	-8	N
STH77_3	110 ft	1	67	59	59	0	-8	N
STH77_4	200 ft	0	72	55	56	1	-17	N
STH77_5	290 ft ⁵	0	72	55	54	-1	-17	N
STH77_6	245 ft	0	72	55	54	-1	-17	N
STH77_7	70 ft	1	67	60	60	0	-7	N
STH77_8	60 ft	1	67	62	59	3	-5	N
STH77_9	100 ft	0	72	59	57	2	-13	N
STH77_10	55 ft	1	67	63	59	4	-4	N
STH77_11	65 ft	1	67	61	56	5	-6	N
STH77_12	60 ft	1	67	62	58	4	-5	N
US 53 at Shell Creek Road modeled receptor locations ⁴								
SCR_1	390 ft	1	67	51	50	1	-16	N
SCR_2	180 ft	1	67	58	57	1	-9	N
SCR_3	330 ft	1	67	55	53	2	-12	N
SCR_4	225 ft	1	67	57	56	1	-10	N
SCR_5	175 ft	1	67	58	57	1	-9	N
SCR_6	190 ft	1	67	58	58	0	-9	N
SCR_7	525 ft	1	67	57	58	-1	-10	N
SCR_8	270 ft	1	67	56	60	-4	-11	N
SCR_9	215 ft	1	67	57	56	1	-10	N
SCR_10	350 ft	1	67	54	58	-4	-13	N
SCR_11	645 ft	1	67	50	50	0	-17	N
SCR_12	345 ft ⁶	1	67	50	50	0	-17	N
SCR_13	160 ft ⁶	1	67	51	52	-1	-16	N
SCR_14	405 ft ⁶	0	72	50	52	-2	-22	N

NA = not applicable because the modeled receptor location would be a residential acquisition as a result of the Proposed Action.

¹ Use whole numbers only.

² Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.

³ An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is -1 db or greater). I = Impact, N = No Impact.

⁴ Approximate distance from the modeled receptor location to the near lane of US 53 (unless otherwise noted).

⁵ Approximate distance from the modeled receptor location to the near lane of WIS 77.

⁶ Approximate distance from the modeled receptor location to the near lane of Shell Creek Road.

US 53 at County T								
Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.)	Number of Families or People Typical of this Receptor Site	Sound Level L_{eq} ¹ (dBA)			Impact Evaluation		
			Noise Abatement Criteria ² (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)	Impact ³ or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
US 53 at County T modeled receptor locations ⁴								
CTHT_1	1,035 ft	1	67	47	53	-6	-20	N
CTHT_2	735 ft	1	67	50	55	-5	-17	N
CTHT_3	480 ft	1	67	53	56	-3	-14	N
CTHT_4	275 ft	1	67	58	57	1	-9	N
CTHT_5	590 ft	1	67	55	50	5	-12	N
CTHT_6	515 ft	1	67	54	51	3	-13	N
CTHT_7	730 ft	1	67	54	49	5	-13	N
CTHT_8	245 ft	1	67	60	59	1	-7	N
CTHT_9	160 ft	0	72	63	62	1	-9	N

NA = not applicable because the modeled receptor location would be a residential acquisition as a result of the Proposed Action.

¹ Use whole numbers only.

² Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.

³ An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is -1 db or greater). I = Impact, N = No Impact.

⁴ Approximate distance from the modeled receptor location to the near lane of US 53 (unless otherwise noted).

HAZARDOUS SUBSTANCES OR CONTAMINATION EVALUATION Wisconsin Department of Transportation

Factor Sheet D-4

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

1. Briefly describe the results of the Phase 1 Hazardous Materials Assessment for this alternative. Do not use property identifiers (owner name, address or business name):

Site Reference #	Land Use of Concern (Past or Present)	Contaminants of Concern	Phase 1 Recommendations	Phase 2 Recommended?
				Y/N
Site #1	Highway right of way (past and present)	Petroleum spill	No further investigation – site closed and would be avoided	N
Site #2	Industrial (past and present)	Fuel oil/soil contamination	No further investigation – site closed and would be avoided	N
Site #3	Industrial (past)	Petroleum spill	No further investigation – site closed and would be avoided	N
Site #4	Bulk oil storage area/railroad (past)	Petroleum spill	No further investigation – open case but would be avoided	N
Site #5	Bulk oil storage area/railroad (past)	Aboveground storage tank leak	No further investigation – ongoing remediation but site would be avoided	N
Site #6	Commercial (former auto repair shop)	Aboveground storage tank leak (petroleum)	No further investigation – site closed, would be avoided unless there are changes during design	N
Site #7	Commercial (former gas service station)	Leaking underground storage tank (petroleum)	No further investigation – site closed and will be avoided	N
Site #8	Commercial (former gas service station)	Leaking underground storage tank (petroleum)	No further investigation – site closed and would be avoided	N
Site #9	Commercial (former and current gas service station)	Leaking underground storage tank (petroleum)	No further investigation – site is closed and would be avoided	N
Site #10	Commercial (past)	Leaking underground storage tank (petroleum)	No further investigation – site is closed and would be avoided	N
Site #11	- Past land uses unknown - Government (present)	Leaking underground storage tank (petroleum)	No further investigation – site is closed and would be avoided	N
Site #12	County forest land (former dump site)	Arsenic disposal location	No further investigation – site is pending closure and would be avoided	N
Site #13	Highway right of way (past and present)	Petroleum spill	No further investigation – site is closed and would be avoided	N
Site #14	- Past land use unknown - Government	Leaking underground storage tank (potential petroleum-related contamination)	Conduct additional investigation to determine if contamination is present if changes are identified in design	Y (Phase 2 recommended; see Item 3 below)

Site Reference #	Land Use of Concern (Past or Present)	Contaminants of Concern	Phase 1 Recommendations	Phase 2 Recommended?
				Y/N
Site #15	Commercial (former gas service station)	LUST site (potential petroleum-related contamination)	Located within existing WisDOT right of way. Conduct additional investigation to determine extent of contamination if any excavation along southbound US 53 at existing intersection with County T is proposed.	N (site closed)

Attach additional sheets, if necessary

Additional comments: Five additional sites were identified near the US 53/WIS 77 interchange location during visual inspections completed in June 2010. Four of these sites are located within the Town of Minong; one site is located within the Village of Minong. These sites are described as follows:

1. Agricultural land use, creosote fence posts
2. Vacant land use, construction debris (asphalt material and concrete)
3. Vacant land use, road construction debris (asphalt material and concrete used as fill material)
4. Residential land use, household materials
5. Commercial land use, unlabeled drums

These sites represent minor concerns. If it is determined during design that these sites would be impacted by the Proposed Action (US 53/WIS 77 interchange and/or local road construction), then additional investigation may be warranted. (See Item 6 below).

2. Were any parcels not included in the Phase 1 assessment?

- No
 Yes - How many:
Why were they not reviewed?

3. Have Phase 2 or 2.5 Assessments been completed? Discuss the results:

Site Reference #	Phase 2/2.5 Recommendations	Remediation Recommended?		Is WisDOT a Responsible Party?	
		Yes	No	Yes	No

No Phase 2 or 2.5 Assessments have been completed. Site #14 is located northeast of the proposed County T grade separation at US 53. A Phase 2 Assessment is recommended for Site #14 to determine the extent of potential petroleum-related contamination if substantial changes to the proposed County T grade separation are identified during design.

Site #15 was acquired by WisDOT in 1993 and is located within existing WisDOT right of way. The site met cleanup standards prior to construction of the existing US 53 expressway. Petroleum-related contaminants were present in soils tested by WisDOT when the site was acquired in 1993. A request for closure was granted in June 2004. A Phase 3 investigation is recommended if for any proposed excavation is identified during design at the existing southbound US 53/County T intersection.

4. Describe the results of any additional investigations performed by WisDOT or others: (Include the number of sites investigated, the level of investigation and results for each site)

No known additional investigations have been performed.

5. Describe proposed actions to avoid hazardous materials contamination:

The proposed grade-separations at US 53 and County F and US 53 at County T and WIS 77 interchange were identified in part because fewer parcel impacts/acquisition compared to other studied alternatives.

6. Describe the remediation and waste management practices to be included in the design for areas where contamination cannot be avoided (e.g., waste handling plan, remediation of contamination, design changes to minimize disturbances):

The proposed County T grade separation is located to the south of Site #15. The existing US 53/County T intersection would be partially closed (i.e., median closure) with the proposed action. No excavation is anticipated at the existing intersection; however, construction of the County T overpass and connecting roads may require excavation. Any petroleum contamination encountered during construction will be handled in accordance with WisDOT standard specifications and applicable regulations.

Five sites were identified by visual inspection near the proposed US 53/WIS 77 interchange as described above under Item 1. These five sites are of minor concern; however, if these sites are determined to be impacted by the Proposed Action, then associated contamination (i.e., creosote fence posts, construction debris, household materials, unlabeled drums) will be disposed of in accordance with applicable regulations.

7. List any parcels with known contamination, proposed for acquisition:

Not applicable. Three parcels are proposed for acquisition at WIS 77 and US 53 in the Village of Minong. There is no known contamination associated with these parcels.

8. Bridge Projects Only: Has the structure been inspected for the presence of asbestos containing materials (ACMs)?

Not applicable.

No - Explain

Yes:

Were regulated ACMs identified?

No

Yes:

State the standard language to be incorporated in the special provisions of the project:

STORMWATER EVALUATION

Factor Sheet D-5

Alternative: Preferred Alternative for US 53 at County F, WIS 77, and County T	Total Length of Center Line of Existing Roadway: Varies Length of This Alternative: See Preferred Alternative descriptions in basic sheets
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Indicate whether the affected area may cause a discharge or will discharge to the waters of the state (Trans 401.03).

Special consideration should be given to areas that are sensitive to water quality degradation. Provide specific recommendations on the level of protection needed.

- No water special natural resources are affected by the alternative.
- Yes - Water special natural resources exist in the project area.
 - River/stream
 - Wetland
 - Lake
 - Endangered species habitat
 - Other – Describe

The following special natural resources are located within the project area:

Silver Lake is located to the northeast of the proposed County F grade separation at US 53. Silver Lake is a landlocked, clear water seepage lake containing a warm water fishery consisting mostly of walleye, northern pike, largemouth bass, and panfish. The lake is also used by wildlife such as muskrats and nesting and migratory waterfowl. Storm water management measures will be identified during design to minimize runoff and water quality impacts to Silver Lake (see Item 3 through Item 5 below).

Shell Creek is a spring-fed and drainage stream that begins at Bond Lake, southeast of the Village of Minong. Shell Creek crosses US 53 north of the Village, then flows to the southwest, crossing Shell Creek Road west of US 53. From its headwaters at Bond Lake down to County I, Spring Creek is classified as a Class II brook trout stream. West of the Village of Minong to County I, a segment of Spring Creek is classified as a Type I trout stream.¹ Grade changes to Shell Creek Road to accommodate the proposed overpass over US 53 would affect this culvert crossing. Design studies would be completed to ensure there are no increases in backwater elevations as a result of impacts to this crossing. Timing restrictions would be necessary to prevent in-stream related construction during the spawning and nursery period for trout (see WDNR correspondence in Appendix F).

Bergen Creek is located to the northwest of the proposed County T grade separation at US 53. An unnamed drainage crosses US 53 north of the existing US 53/County T intersection. Bergen Creek is a clear-water Class II brook trout stream from the headwaters down to the Leader Lake crossing in Section 22. Downstream from this location, it is classified as a Class III brook trout stream. The stream contains populations of northern pike, white sucker, burbot, and minnows. The stream is used by beaver and migrating and nesting waterfowl. Runoff from the County T grade separation at US 53 would be conveyed and discharged to wetland complexes to the south of the proposed County T alignment. No impacts to Bergen Creek are anticipated.

Several wetland types are located throughout the project area at US 53 and County F, US 53 at WIS 77 and US 53 at County T. Wetlands provide many functions including floodwater retention, filtering of storm water, and habitat for many different animal species (e.g., waterfowl production, furbearers, frogs, turtles, and aquatic invertebrates). Opportunities for further minimization of potential wetland impacts will be addressed during design. Unavoidable wetland impacts would be mitigated based on rules and regulations in place at the time of design and construction.

¹ Wisconsin Department of Natural Resources. 2010. Wisconsin Department of Natural Resources Web Page (online). Wisconsin DNR Surface Water Data Viewer accessed 2010-12-08 at <http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer>.

2. Indicate whether circumstances exist in the project vicinity that require additional or special consideration, such as an increase in peak flow, total suspended solids (TSS) or water volume.

- No additional or special circumstances are present.
- Yes - Additional or special circumstances exist. Indicate all that are present.
- | | |
|--|---|
| <input checked="" type="checkbox"/> Areas of groundwater discharge | <input checked="" type="checkbox"/> Areas of groundwater recharge |
| <input type="checkbox"/> Stream relocations | <input type="checkbox"/> Overland flow/runoff |
| <input type="checkbox"/> Long or steep cut or fill slopes | <input type="checkbox"/> High velocity flows |
| <input checked="" type="checkbox"/> Cold water stream | <input type="checkbox"/> Impaired waterway |
| <input type="checkbox"/> Large quantity flows | <input checked="" type="checkbox"/> Exceptional/outstanding resource waters |
| <input type="checkbox"/> Increased backwater | |
| <input type="checkbox"/> Other - Describe any unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances. _____ | |

Silver Lake, east of the proposed County F grade separation, is listed as impaired for mercury. Mercury deposition is associated with industrial activities, and is not typically associated with roadway runoff.

Shell Creek is an Outstanding Resource Water (ORW). This designation is given to surface waters that provide outstanding recreational opportunities, support valuable fisheries and wildlife habitat, have good water quality, and are not significantly impacted by human activities. Although ORWs do not have any point sources discharging pollutants directly to the water, they may receive runoff from nonpoint sources. ORWs receive the state's highest protection standards and no increases of pollutant levels are allowed.

3. Describe the overall stormwater management strategy to minimize adverse effects and enhance beneficial effects.

Best management practices (BMPs) and standard WisDOT erosion control methods will be used during construction as per WisDOT standard specifications for highway and structure construction. Coordination with WDNR would also occur closer to design/construction for compliance with Trans 401 and the WisDOT/WDNR Cooperative Agreement.

Temporary and permanent erosion control methods may include, but are not limited to:

- Silt fence and/or silt screen at the toe of fill slopes to avoid accumulation in wetland or undisturbed areas.
- Inlet protection measures at culvert and area drains as required.
- Temporary ditch checks, erosion mat, and rip rap may be used, as appropriate, for reducing particle transmission and sedimentation along swale drainage and ditches.
- Permanent seed or sod would be used on finished topsoil surfaces.
- WisDOT would make every effort to design the grade separated crossings so that any runoff from the crossing would be contained within the area through runoff basins and directed ditching.
- Final determination of these measures would be made closer to design and construction.

4. Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 requirements.

- Stormwater management measures will be identified during design and incorporated into the project based on Trans 401 requirements in place at that time.
- An Erosion Control Implementation Plan (ECIP) would be prepared by the contractor and approved by WisDOT based on regulations in place at the time of construction. Prior to construction, WDNR would be given the opportunity to review the ECIP and comment.
- Water quality certification from WDNR and applicable Army Corps of Engineer permits would be applied for as required for discharge and fill into US inland waters.

5. Identify the stormwater management measures to be utilized.

- | | |
|--|--|
| <input type="checkbox"/> Swale treatment (parallel to flow)
Trans 401.106(10) | <input type="checkbox"/> In-line storm sewer treatment, such as catch basins,
non-mechanical treatment systems. |
| <input type="checkbox"/> Vegetated filter strips
(perpendicular to flow) | <input type="checkbox"/> Detention/retention basins – Trans 401.106(6)(3) |
| <input type="checkbox"/> Constructed storm water wetlands | <input type="checkbox"/> Distancing outfalls from waterway edge |
| <input type="checkbox"/> Buffer areas – Trans 401.106(6) | <input type="checkbox"/> Infiltration – Trans 401.106(5) |
| | <input checked="" type="checkbox"/> Other |

Final stormwater management measures will be determined in accordance with regulations and Trans 401 requirements in place at the time of design and construction. These measures could include the stormwater management measures identified above, or other WisDOT best management practices (BMPs) in use at that time.

6. Indicate whether any Drainage District may be affected by the project.

- No - None identified
- Yes

Has initial coordination with a drainage board been completed?

- No - Explain _____
- Yes - Discuss results _____

7. Indicate whether the project is within WisDOT's Phase I or Phase II stormwater management areas.

Note: See Procedure 20-30-1, Figure 1, Attachment A4, the Cooperative Agreement between WisDOT and WisDNR. Contact Regional Stormwater/Erosion Control Engineer if assistance is needed to complete the following:

- No - the project is outside of WisDOT's stormwater management area.
- Yes - The project affects one of the following and is regulated by a WPDES stormwater discharge permit, issued by the WisDNR:
 - A WisDOT storm sewer system, located within a municipality with a population greater than 100,000.
 - A WisDOT storm sewer system located within the area of a notified owner of a municipal separate storm sewer system.
 - An urbanized area, as defined by the U.S. Census Bureau, NR216.02(3).
 - A municipal separate storm sewer system serving a population less than 10,000.

8. Has the effect on downstream properties been considered?

- No
- Yes - Coordination is in process.

Storm water management measures will be identified during design to provide attenuation to maintain existing discharge rates and to maintain existing drainage patterns. Effects on downstream properties will be further evaluated during design.

9. Are there any property acquisitions required for storm water management purposes?

- No
- Yes - Complete the following:
 - Safety measures, such as fencing are not needed for potential conflicts with existing and expected surrounding land use.
 - Safety measures are needed for potential conflicts with existing and expected surrounding land use.
Describe:

Storm water management measures will be identified during design consistent with regulations and Trans 401 requirements in place at that time. Based on the current design, it is anticipated that storm water management measures can be identified within existing or proposed WisDOT right of way.

EROSION CONTROL EVALUATION

Factor Sheet D-6

Alternative:
Preferred Alternative for County F, WIS 77, and County T

Total Length of Center Line of Existing Roadway: Varies
Length of This Alternative:
See Preferred Alternative descriptions in basic sheets

Preferred

Yes No None identified

1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.

US 53 at County F (Soil Types and Existing Slopes)

Terrain at US 53 and County F is rolling. A high point is located near the existing US 53/County F intersection, with topography falling away from US 53 to the east, west, and south. Soil types at US 53 and County F consist of sandy loam, loamy sand, gravelly sand, gravelly coarse sand, and sand soils. Natural Resource Conservation Service (NRCS) soil map units within the project area at County F include Pence sandy loam (215B, 0 to 6 percent slopes), Mahtomedi loamy sand (383C, 6 to 12 percent slopes and 383D, 12 to 30 percent slopes), and Keweenaw-Pence complex soils (670C, 6 to 15 percent slopes and 670E, 15 to 45 percent slopes).

US 53 at WIS 77 (Soil Types and Existing Slopes)

Terrain at US 53 and WIS 77 is fairly level. Soil types at US 53 and WIS 77 consist of sand, sandy loam, loamy sand, loamy coarse sand, gravelly coarse sand, and muck soils. NRCS soil map units within the project area at WIS 77 include Menahga sand (100B, 0 to 6 percent slopes; 100C, 6 to 12 percent slopes; and 100D, 12 to 30 percent slopes), Seelyeville and Markey soils (407A, 0 to 1 percent slopes), Graycalm-Menahga complex (439B, 0 to 6 percent slopes), Lenroot loamy sand (771A, 0 to 3 percent slopes), and Fremstadt, stony-Cress complex (1070D, 15 to 30 percent slopes).

US 53 at County T (Soil Types and Existing Slopes)

Terrain at US 53 and County T is fairly level, with a ridge that runs east-west near the existing US 53/County T intersection. Soil types at US 53 and County T consist of loamy sand, sand, and muck soils. NRCS soil map units within the project area at County T include Grayling sand (399C, 6 to 12 percent slopes), Loxley mucky peat (406A, 0 to 1 percent slopes), Seelyeville and Markey soils (407A, 0 to 1 percent slopes), and Graycalm-Menahga complex soils (439B, 0 to 6 percent slopes; 439C, 6 to 12 percent slopes; and 439D, 12 to 30 percent slopes).

Proposed Action (County F, WIS 77, and County T – Proposed Slopes)

The proposed grade-separated crossing at US 53 and County F, interchange at US 53 and WIS 77, Shell Creek Road overpass, and grade-separated crossing at US 53 and County T would follow standard design criteria of 4:1 fill slopes within the clear zone and would be steepened beyond the clear zone as practical and permissible to minimize the effects on adjacent properties. Longitudinal slopes will vary from -6% to +6% dependant on local road locations. Overpass locations would be designed with the maximum longitudinal slopes permissible to minimize impacts to previously undisturbed parcels.

2. Indicate all natural resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.

- No - there are no sensitive resources affected by the proposal.
- Yes - Sensitive resources exist in or adjacent to the area affected by the project.
 - River/stream
 - Lake
 - Wetland
 - Endangered species habitat
 - Other - Describe _____

3. Are there circumstances requiring additional or special consideration?

- No - Additional or special circumstances are not present.
- Yes - Additional or special circumstances exist. Indicate all that are present.
- Areas of groundwater discharge
 - Overland flow/runoff
 - Long or steep cut or fill slopes
 - Areas of groundwater recharge (fractured bedrock, wetlands, streams)
 - Other - Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances _____

4. Describe overall erosion control strategy to minimize adverse effects and/or enhance beneficial effects.

Standard WisDOT erosion control methods would be used during construction in accordance with WisDOT Standard Specifications. Coordination with WDNR would also occur closer to the design and construction phases of these improvements in compliance with Trans 401 and the WisDOT/WDNR Cooperative agreement. Common erosion control measures would include, but not be limited to silt fence at the toe of fill slopes or silt screen where unavoidable wetland, stream, or lake impacts exist. The contractor's Erosion Control Implementation Plan (ECIP) would address individual concerns identified during the design phase of the proposed work.

Borrow or waste areas would follow practices set forth in Trans 401, Wisconsin Administrative Code and the WisDOT/WDNR Cooperative Agreement. The contractor's ECIP for borrow sites and waste areas would address erosion control. The ECIP would establish the schedule of implementation for temporary and permanent erosion control devices on the proposed project and at the project borrow or waste sites. The ECIP would become part of the contract and would be submitted to WisDOT for approval and to WDNR for concurrence. Revegetation of the project site, including any borrow pit sites and waste areas, would be incorporated as a component of the project's erosion control plan, ECIP and construction contract. Revegetation and stabilization of cleared and graded areas shall be accomplished through a combination of seed, mulch, erosion mats, or sod. Revegetation would occur as soon as practicable following the grading operations of the project.

5. Erosion control measures reached consensus with the appropriate authorities as indicated below:

- WisDNR
- County Land Conservation Department
- American Indian Tribe
- US Army Corps of Engineers

Final erosion control measures to be determined in accordance with Best Management Practices (BMPs) and regulations in place at time of design and construction.

Note: All erosion control measures (i.e., the Erosion Control Plan) shall be coordinated through the WisDOT-WisDNR liaison process and TRANS 401 except when Tribal lands of American Indian Tribes are involved. WisDNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor to prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WisDNR and to WisDOT 14 days prior to the preconstruction conference (Trans401.08(1)) and must be approved by WisDOT before implementation. On Tribal lands, coordination for 402 (erosion) concerns are either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (EPA). EPA or the tribes have the 401 water quality responsibility on Trust lands. Describe how the Erosion Control/Storm Water Management Plan can be compatible.

6. Identify the temporary and permanent erosion control measures to be utilized on the project. Consult the FDM, Chapter 10, and the Products Acceptability List (PAL).

- | | |
|--|---|
| <input type="checkbox"/> Minimize the amount of land exposed at one time | <input type="checkbox"/> Detention basin |
| <input type="checkbox"/> Temporary seeding | <input type="checkbox"/> Vegetative swales |
| <input type="checkbox"/> Silt fence | <input type="checkbox"/> Pave haul roads |
| <input type="checkbox"/> Ditch checks | <input type="checkbox"/> Dust abatement |
| <input type="checkbox"/> Erosion or turf reinforcement mat | <input type="checkbox"/> Rip rap |
| <input type="checkbox"/> Ditch or slope sodding | <input type="checkbox"/> Buffer strips |
| <input type="checkbox"/> Soil stabilizer | <input type="checkbox"/> Dewatering – Describe method |
| <input type="checkbox"/> Inlet protection | <input type="checkbox"/> Silt screen |
| <input type="checkbox"/> Turbidity barriers | <input type="checkbox"/> Temporary diversion channel |

- Temporary settling basin
- Mulching
- Other:

Permanent seeding

Final erosion control measures will be determined in accordance with BMPs and regulations in place at time of design and construction.

LIST OF APPENDICES

Appendix A: Project Area Maps

Appendix B: Alternative Selection Report (June 2009)

Appendix C: Alternatives Comparison Matrices

Appendix D: Preferred Alternatives (County F, WIS 77, and County T)

Appendix E: 2010 US Census Data

Appendix F: Agency Correspondence

Appendix G: Section 106 Review Forms

Appendix H: Tribal Correspondence

Appendix I: Indirect and Cumulative Effects Analysis

APPENDIX A

Project Area Maps

Figure 1: Area Location

Figure 2: Proposed Improvement Locations

Generalized Existing Land Use – Town of Brooklyn

Source: Town of Brooklyn Comprehensive Plan (2004)

Generalized Existing Land Use – Town of Minong

Source: Town of Minong Comprehensive Plan (2001)

Generalized Existing Land Use – Town of Wascott

Source: Town of Wascott Comprehensive Plan (2005)

Exhibit 1: Wetlands – County F

Exhibit 2: Wetlands – WIS 77

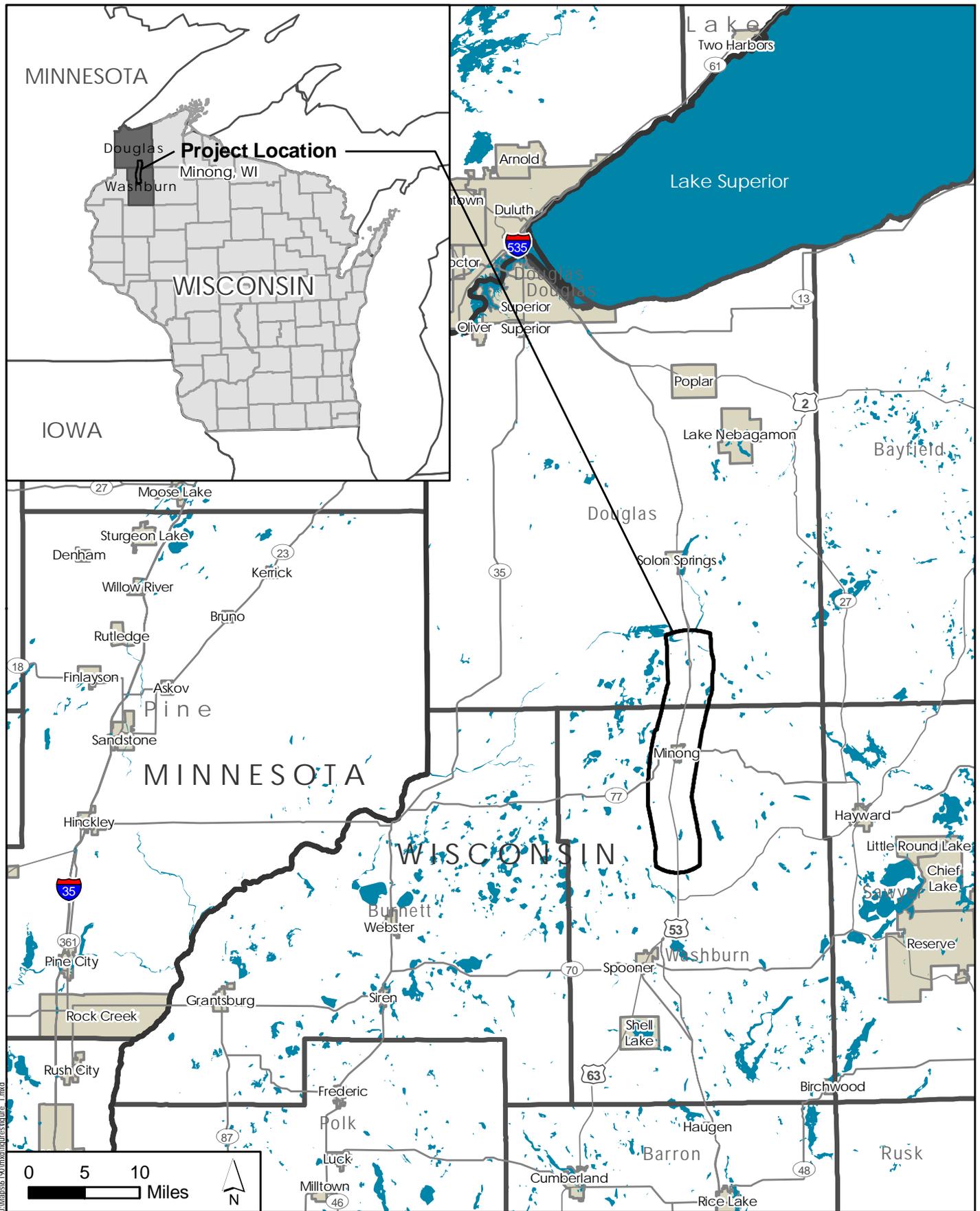
Exhibit 3: Wetlands – County T

Exhibit 4: CTH F Modeled Receptor Location Map

Exhibit 5A: WIS 77 Modeled Receptor Location Map

Exhibit 5B: WIS 77 Modeled Receptor Location Map

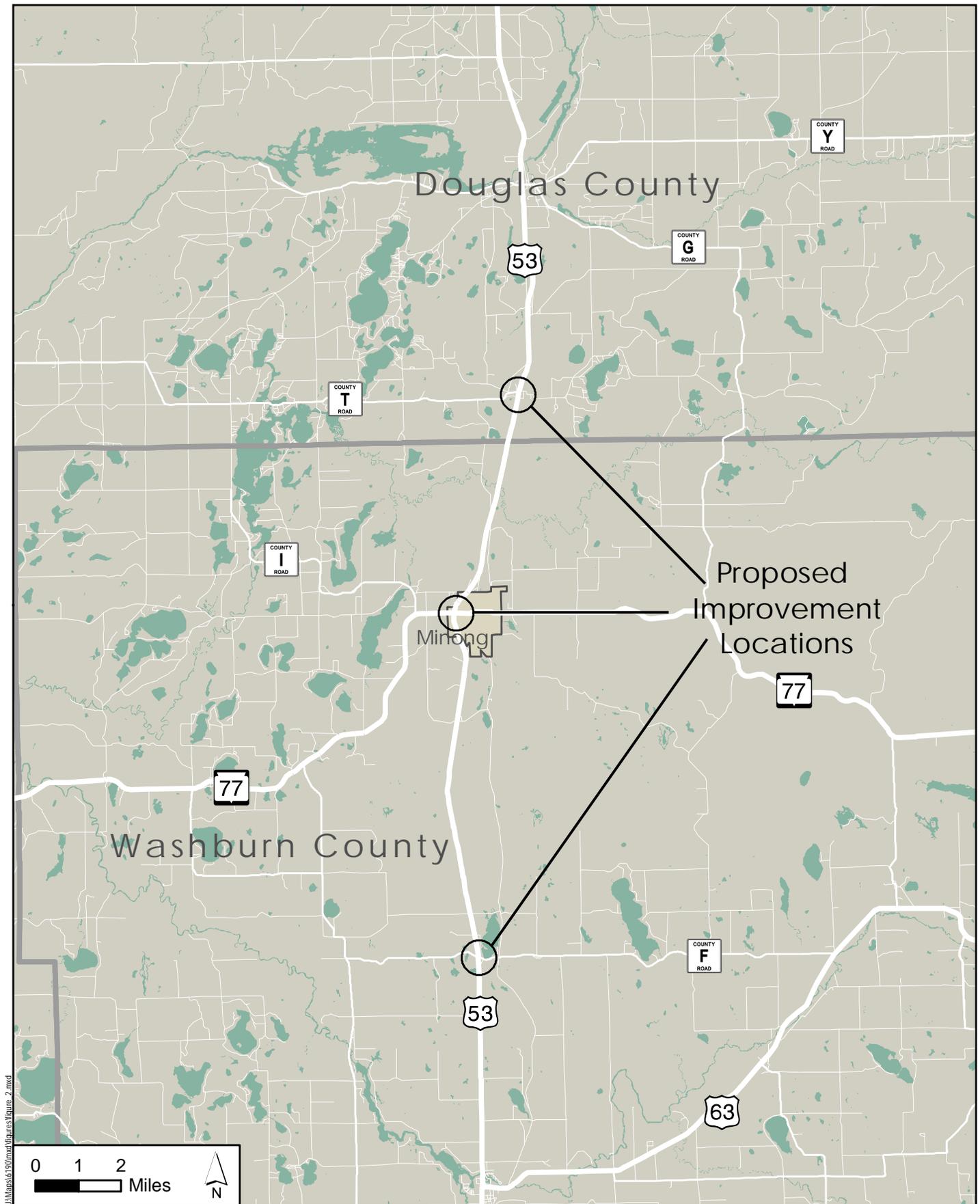
Exhibit 6: CTH T Modeled Receptor Location Map



Area Location

USH 53 Corridor Preservation, Minong Area
 Project 1195-01-00
 Wis/DOT

Figure 1

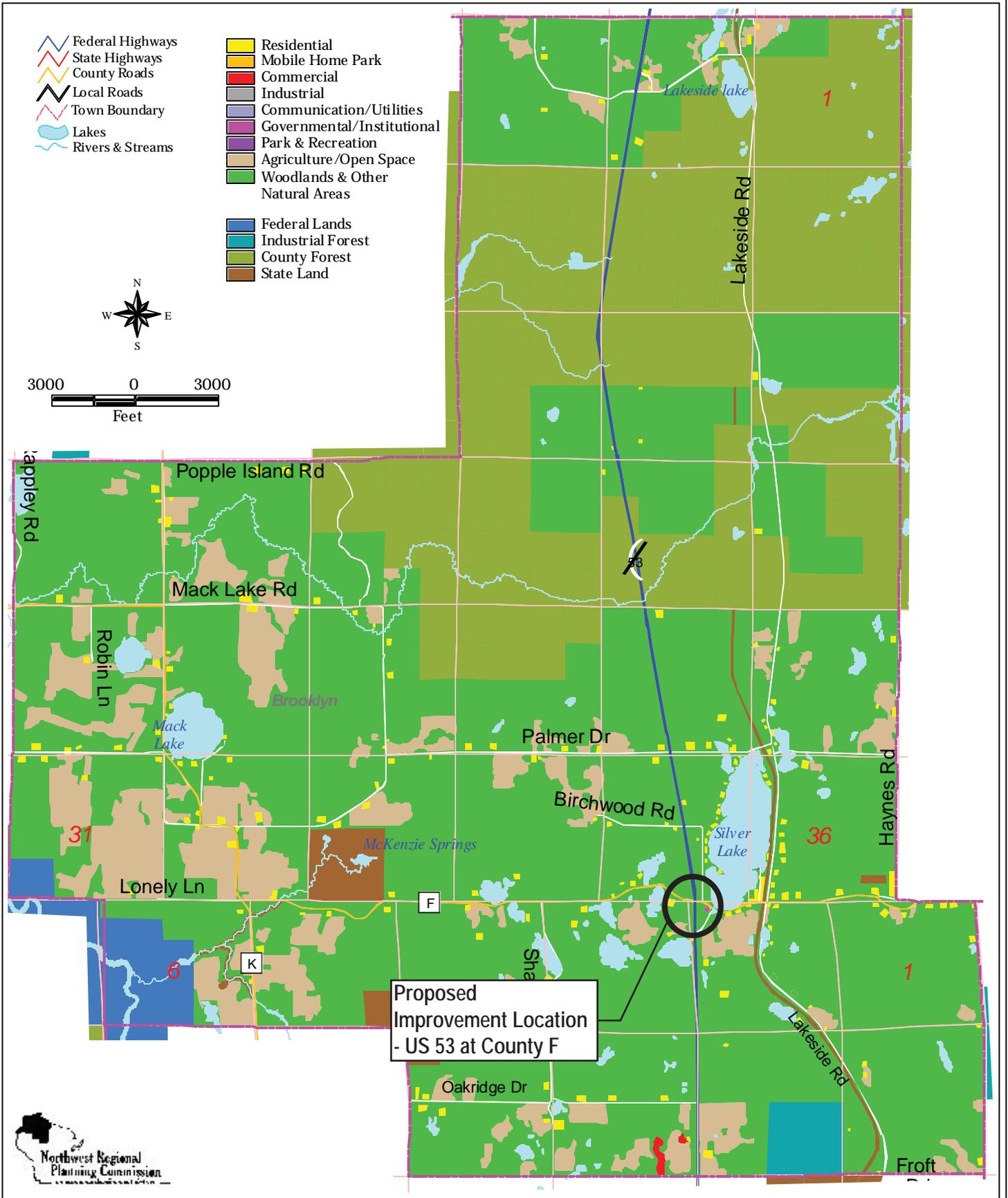


Proposed Improvement Locations

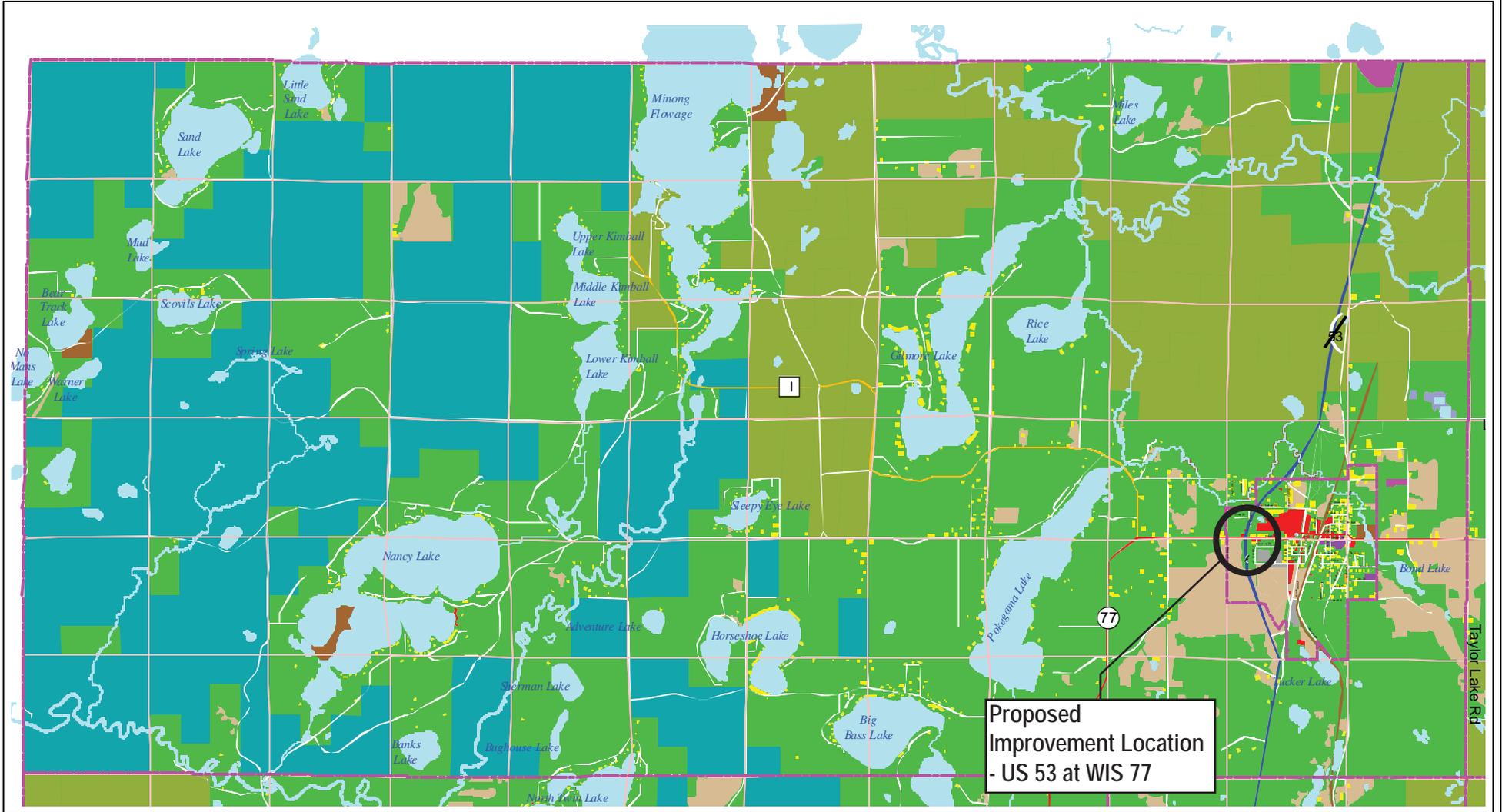
USH 53 Corridor Preservation, Minong Area
 Project 1195-01-00
 Wis/DOT

Figure 2

Generalized Existing Land Use Town of Brooklyn



Generalized Existing Land Use Town of Minong

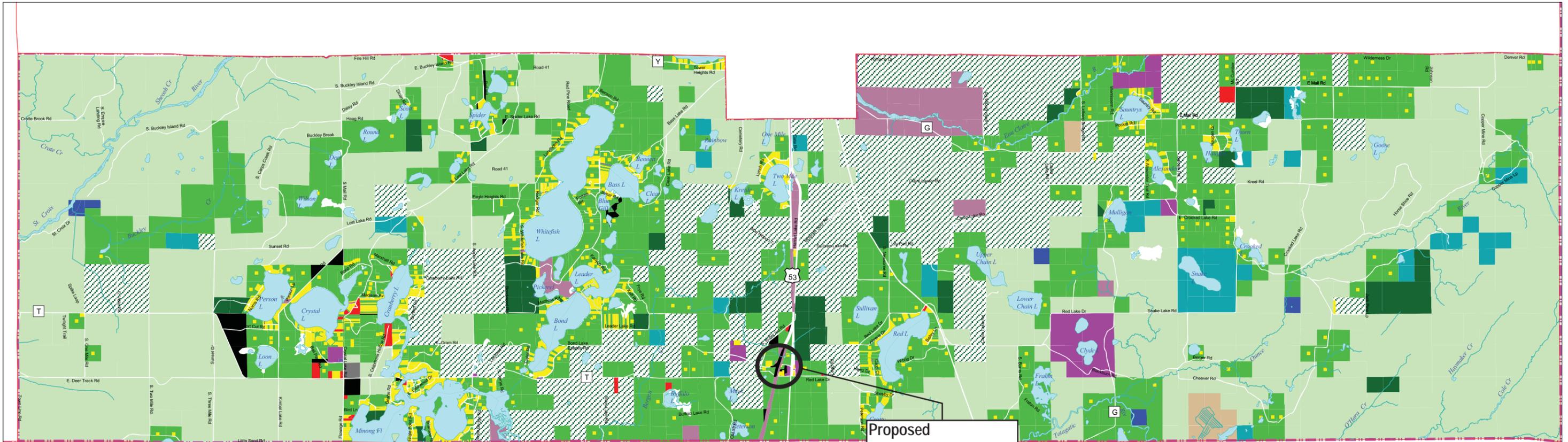


- | | | |
|------------------|---------------------------------|-------------------|
| Federal Highways | Residential | Federal Lands |
| State Highways | Mobile Home Park | Industrial Forest |
| County Roads | Commercial | County Forest |
| Local Roads | Industrial | State Land |
| Town Boundary | Communication/Utilities | |
| Lakes | Governmental/Institutional | |
| Rivers & Streams | Park & Recreation | |
| | Agriculture/Open Space | |
| | Woodlands & Other Natural Areas | |



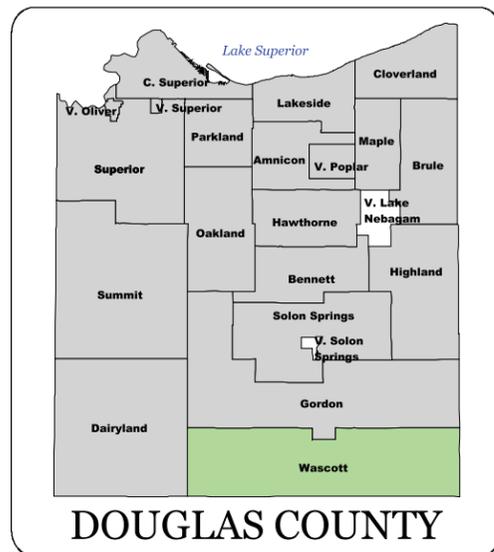
Generalized Existing Land Use Town of Wascott

Map 8.1

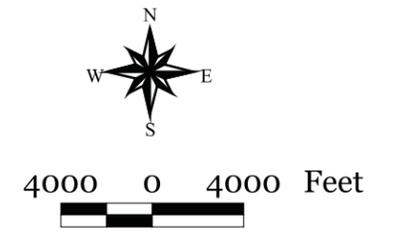


NOTE:
Land use derived from
tax class database

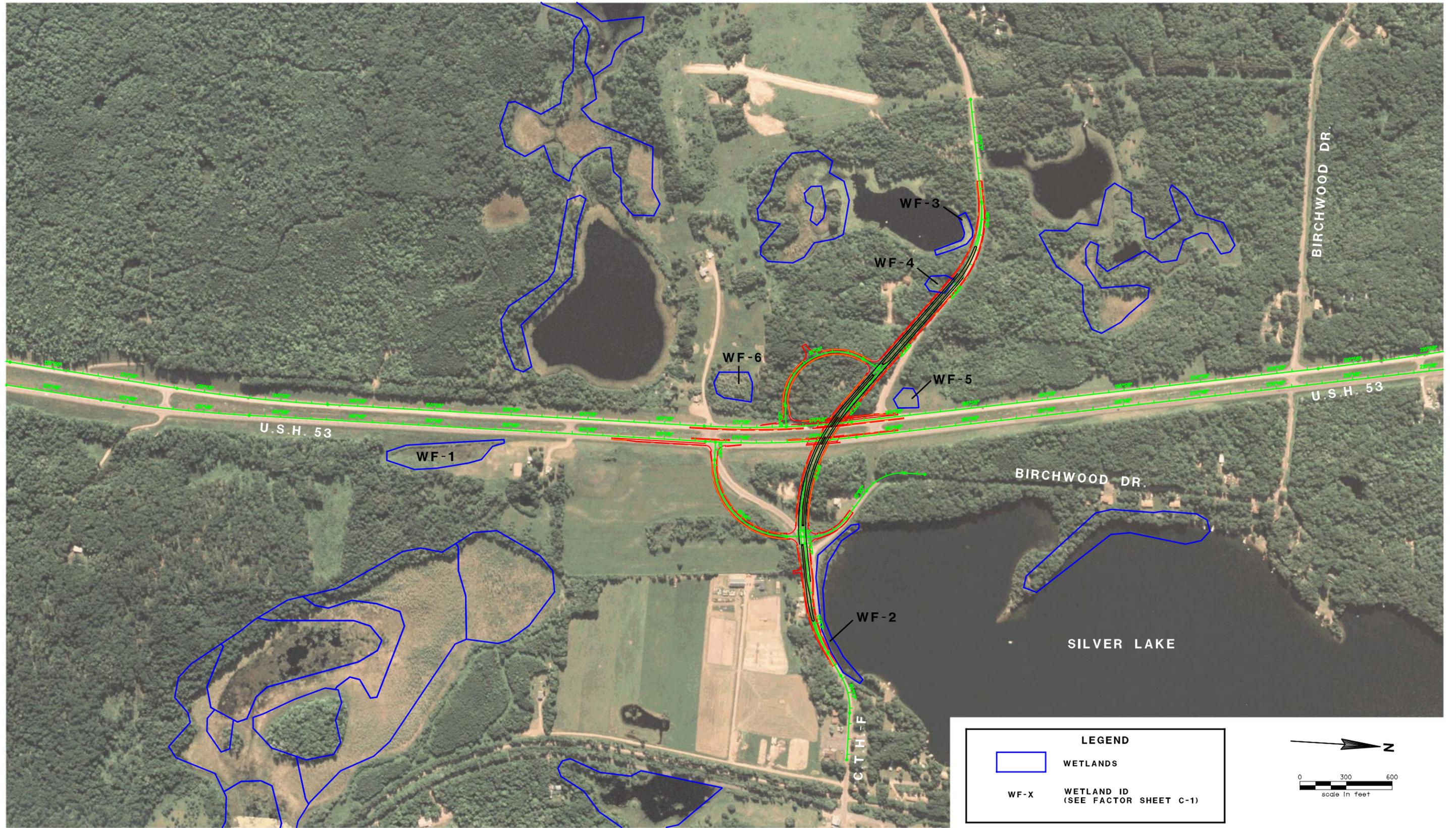
Proposed
Improvement Location
- US 53 at County T



Roads Federal Highway County Road Town Road Other (Trail or Private) Lakes & Ponds Rivers & Streams Town Boundary		Existing Land Use Residential Commercial Government/Institutional Utilities Park & Rec Agricultural Woodlands/ Other Natural Area		Public/Special Woodlands Federal Land State Land County Land MFL MFL - Industrial Private Forest Crop	
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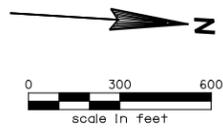


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Wetlands - US 53 at County F

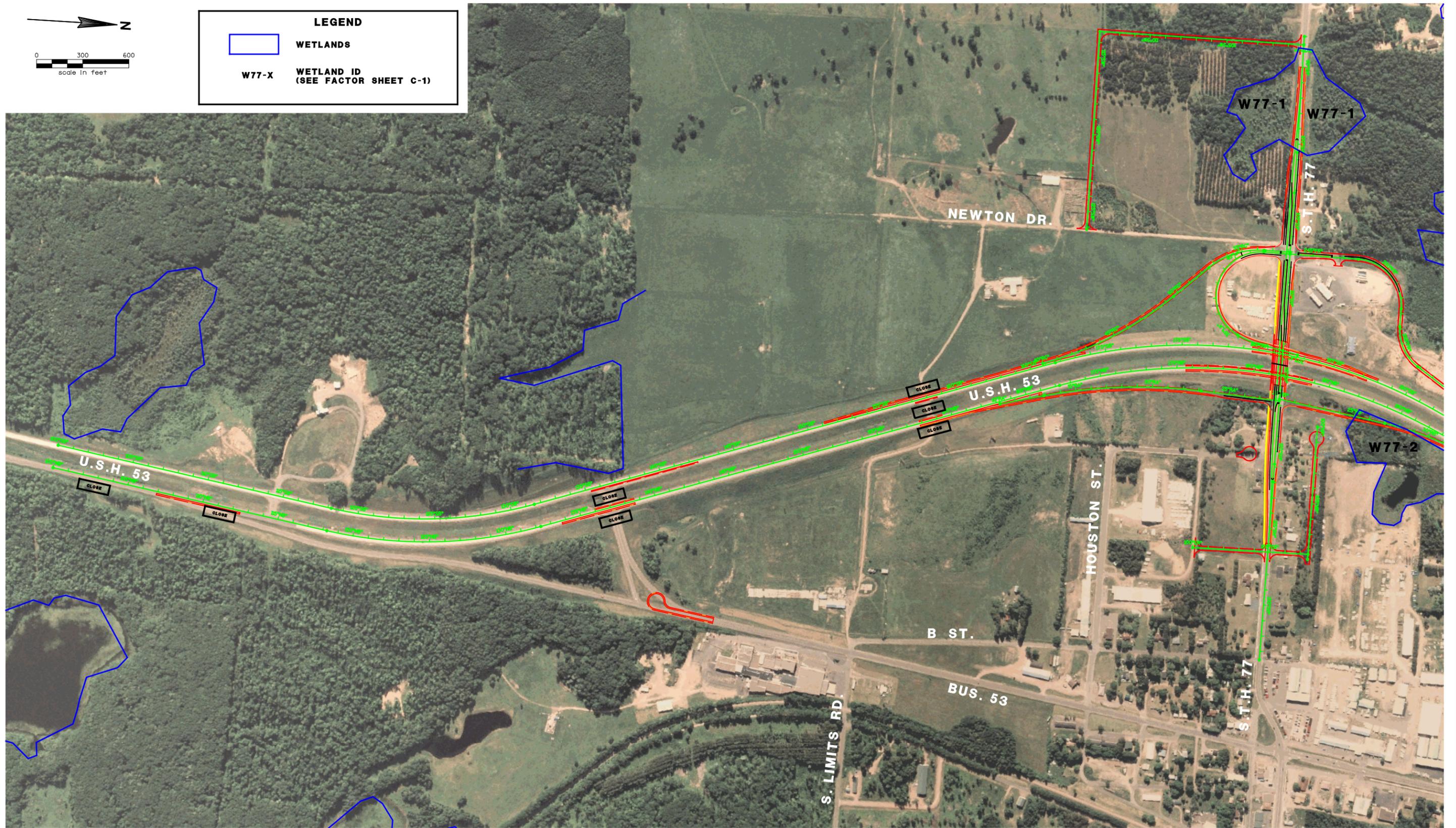
USH 53 Corridor Preservation, Minong Area
 Project 1195-01-00
 Wis/DOT
 Job #6190
 4/17/2013



LEGEND

WETLANDS

W77-X **WETLAND ID**
(SEE FACTOR SHEET C-1)



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Wetlands - US 53 at WIS 77

USH 53 Corridor Preservation, Minong Area

Project 1195-01-00

Wis/DOT

Job #6190

12/14/2010



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Wetlands - US 53 at WIS 77

USH 53 Corridor Preservation, Minong Area

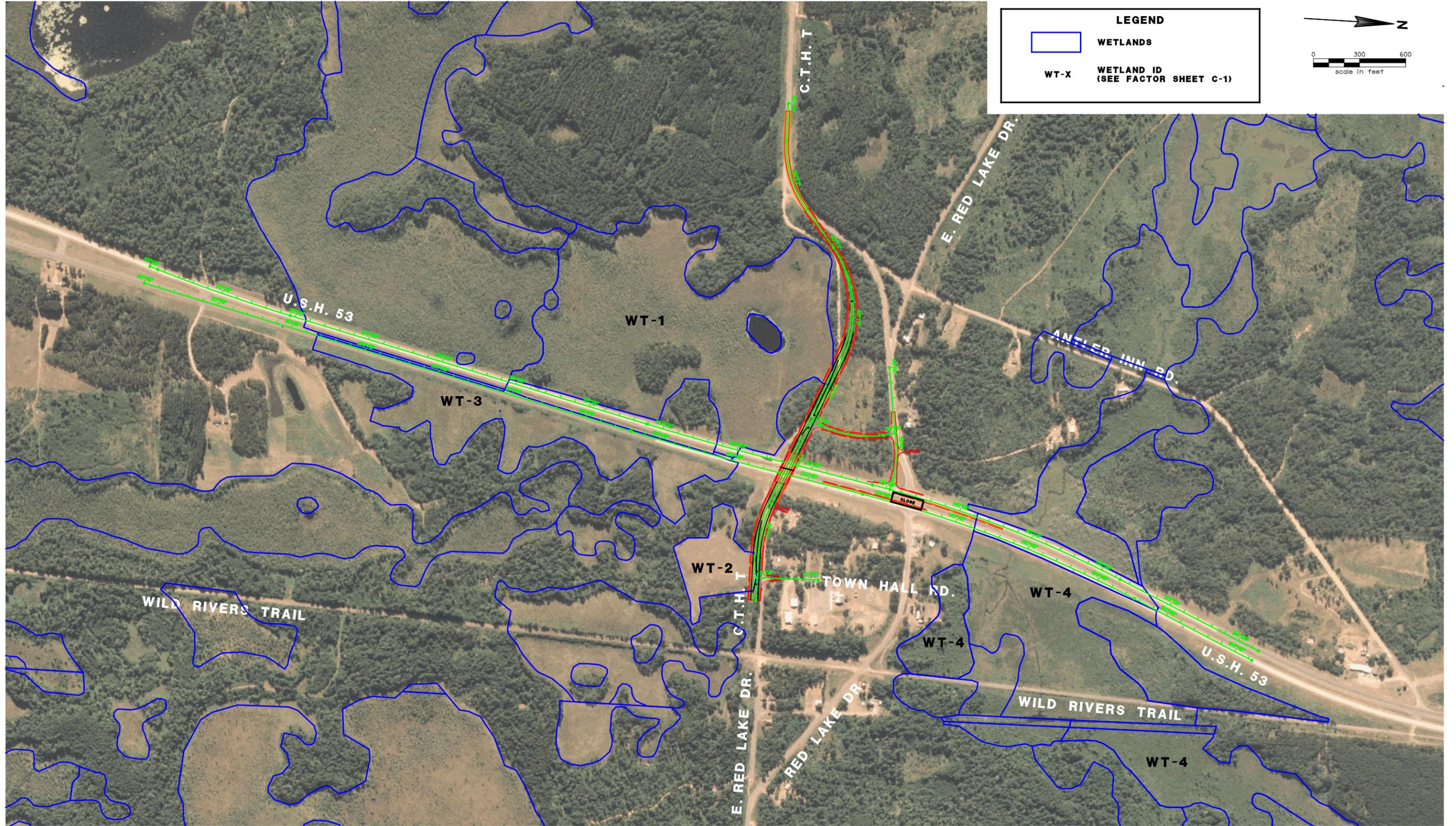
Project 1195-01-00

Wis/DOT

Job #6190

12/14/2010

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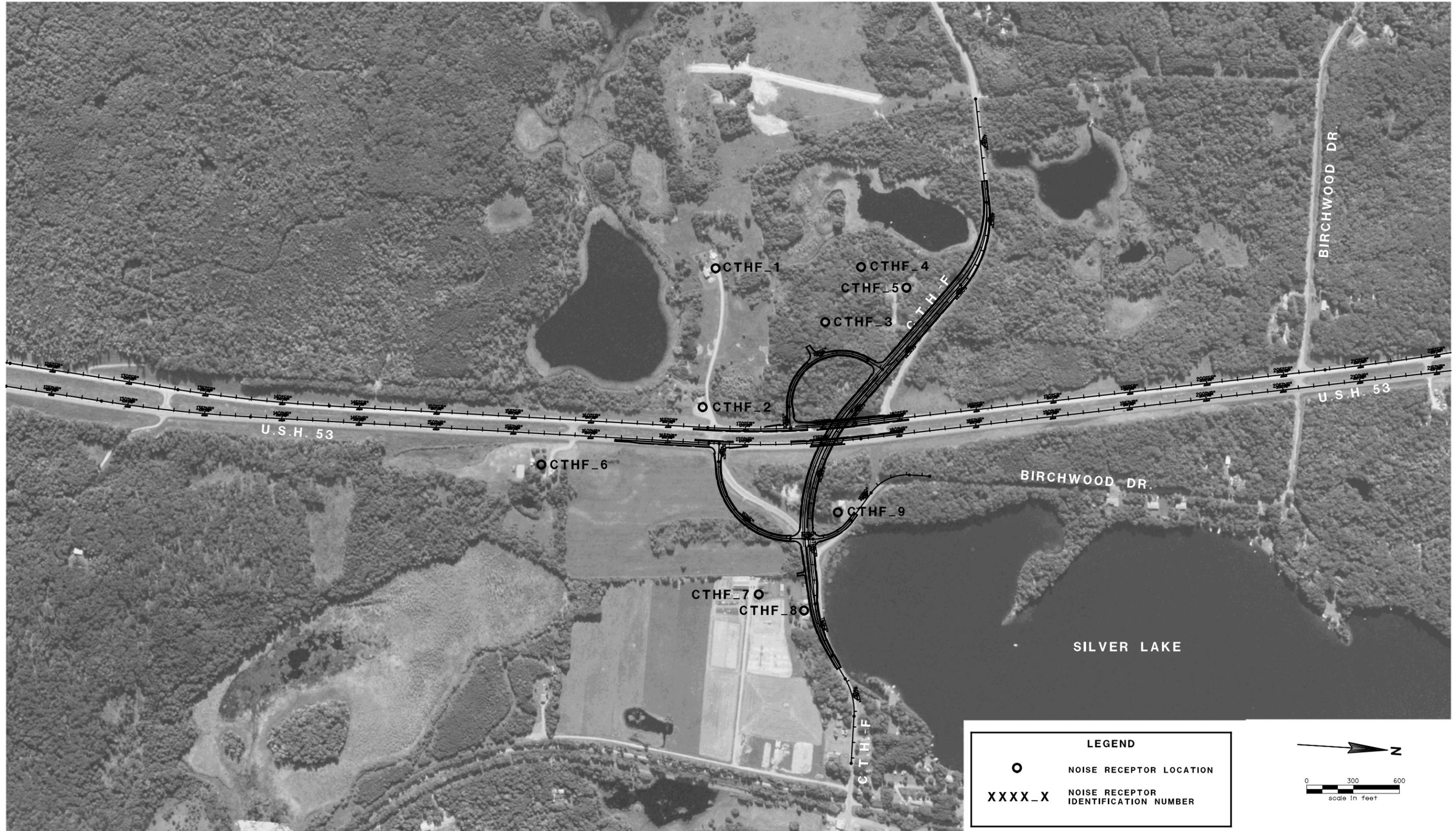


Wetlands - US 53 at County T

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
12/14/2010

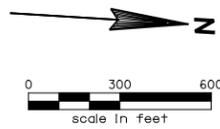
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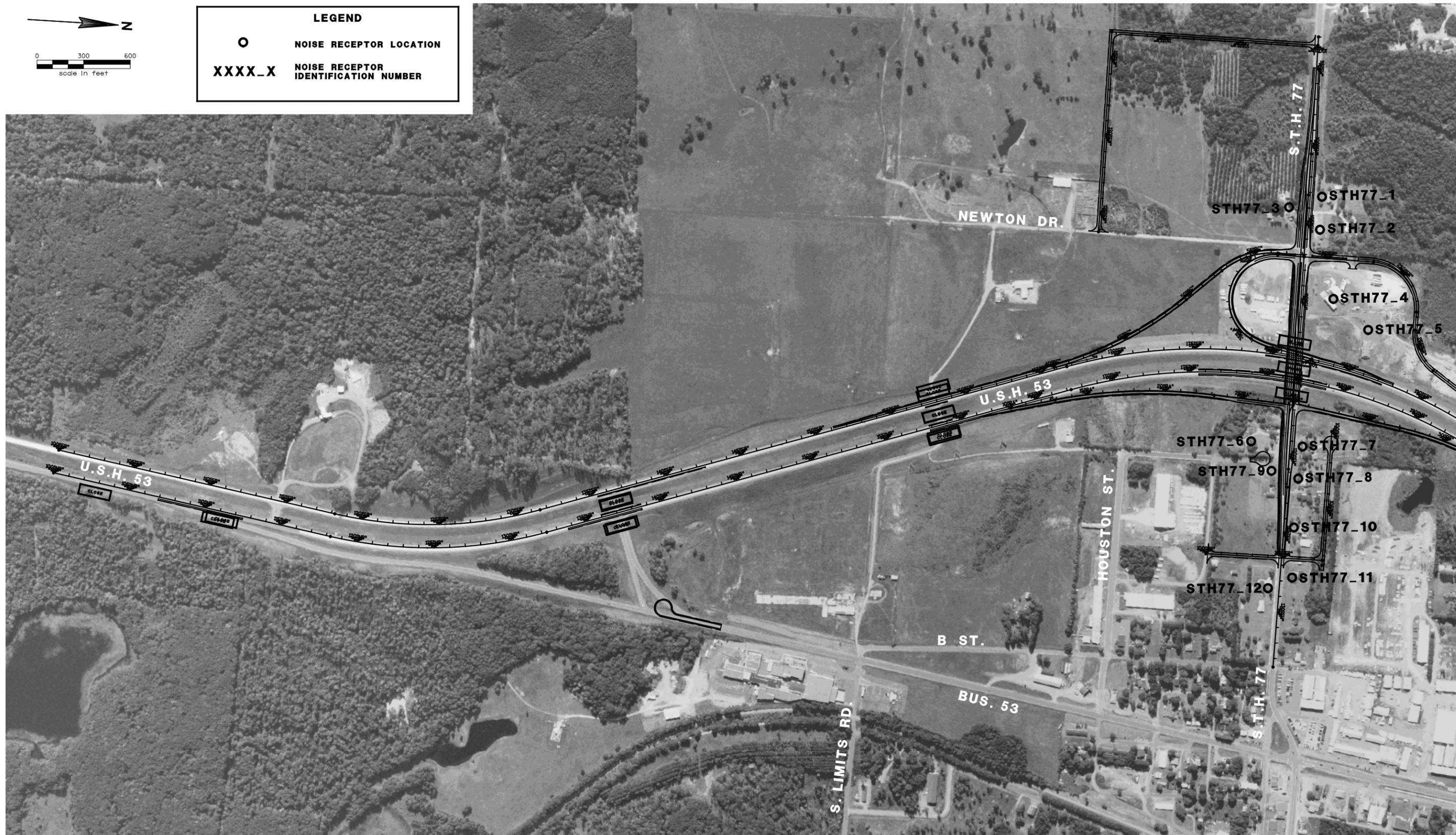
US 53 at County F - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
4/17/2013



LEGEND	
○	NOISE RECEPTOR LOCATION
XXXX_X	NOISE RECEPTOR IDENTIFICATION NUMBER

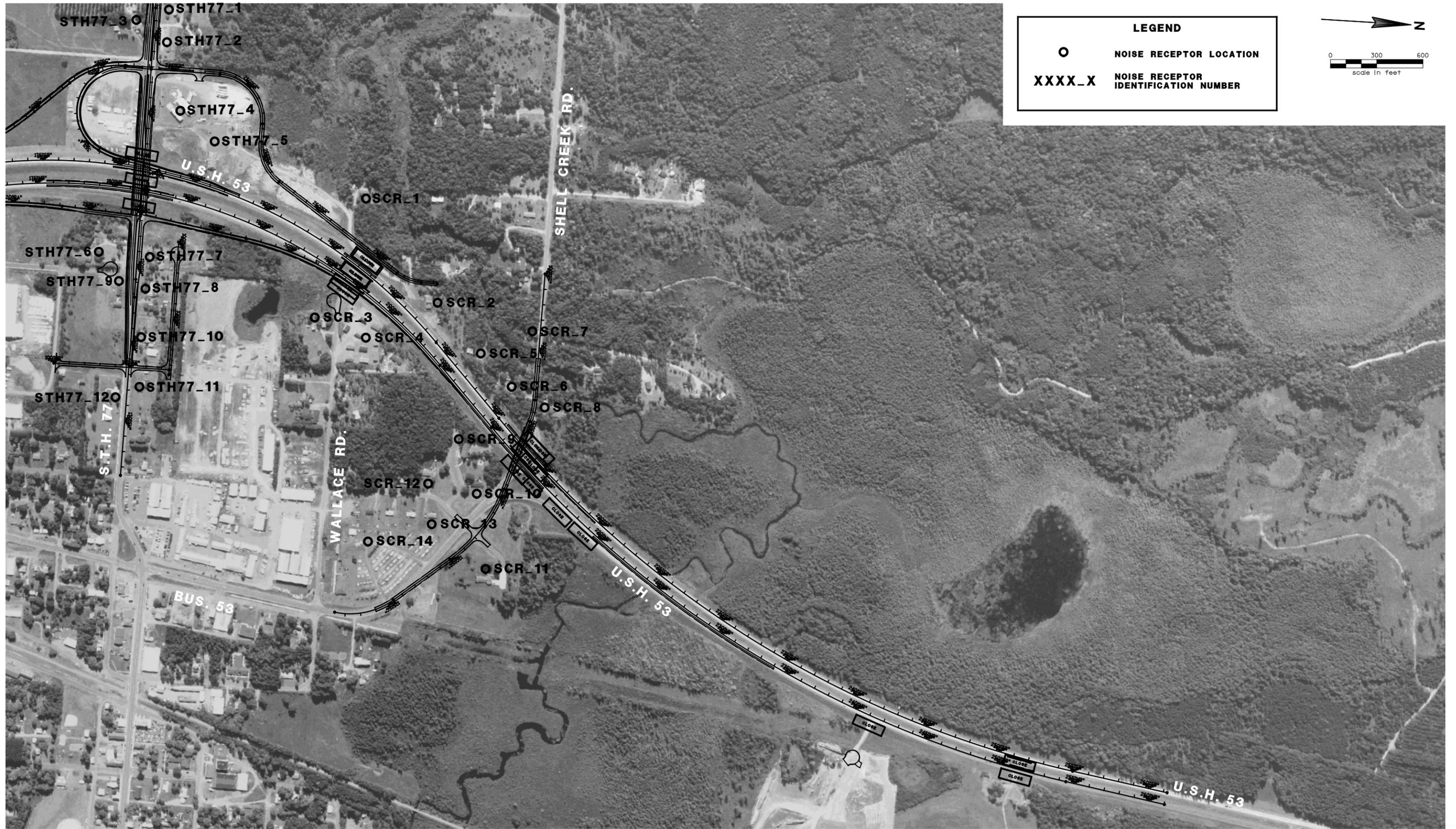


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US 53 at WIS 77 - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
12/14/2010



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US 53 at WIS 77 - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
12/14/2010

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US 53 at County T - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
12/14/2010

APPENDIX B

Alternative Selection Report (June 2009)

6/30/2009



WISCONSIN
DEPARTMENT OF
TRANSPORTATION

USH 53
LAMPSON TO GORDON
1195-01-00

Alternative Selection Report

1195-01-00
Spooner to Solon Springs
Lampson to Gordon
USH 53
Washburn and Douglas Counties

Executive Summary

USH 53 is a Corridors 2020 Backbone route between Superior and Eau Claire and is in the WisDOT Connections 2030 Draft Plan noted for Expressway upgrades or Freeway conversion. Between the communities of Rice Lake and Superior USH53 is currently built to an expressway design with the majority of the access being at-grade intersections. A number of the intersections along the corridor are experiencing injury and fatal crashes at an above average rate. To reduce the number of crashes as well as maintain the mobility of this corridor, current and potentially higher crash areas will be analyzed for potential improvements. This USH 53 corridor was broken into six segments to be evaluated.

This report covers the segment that begins just south of Lampson and continues north to just south of Gordon. Within this area three at-grade intersections were selected to be studied for upgrading to interchanges. These intersections are CTH F near Lampson, STH 77 in Minong and CTH T in Wascott.

Three different alternatives for the CTH F intersection were presented to the public for consideration. Upon completion of the evaluation none of the three interchanges were selected as preferred, but a fourth alternative was developed which consisted of an overpass with right in/right out jug handles. This fourth alternative was found to serve the purpose and need at this location with the least amount of impacts and was selected as the preferred alternative.

Six alternatives were presented for the STH 77 intersection. A wide variety of configurations and locations for the interchange were considered. Alternative 5 was selected as the preferred alternative with the addition of an overpass at Schell Creek Road based on the comments received as well as the evaluation of the impacts.

Three alternatives for the CTH T intersection in Wascott were presented to the public. A fourth and fifth alternative were developed as a result of the comments received at the public meeting. Alternative four is a full interchange with a different ramp configuration and Alternative 5 is an overpass with right in/right out jug handles. Alternative 5 was selected as the preferred alternative because of the reduced impacts to the natural environment as well as meeting the purpose and need at this location.

Milestones

- Introductory LOM/PIM -- 11/18/2007
- Stage I report -- 6/30/2009
- Stage I LOM -- 4/16/2008
- Stage I PIM -- 4/17/2008
- Stage II report -- 6/30/2009
- Stage II LOM -- July 2009
- Stage II PIM -- August 2009
- Environmental Assessment -- March 2010
- Public Hearing -- July 2010
- Recording of Official Map July 2010

Table of Contents

Stage I

- Background
- Factors Effecting alternative Development
- Alternative Descriptions and Discussions
 - CTH F
 - STH 77
 - CTH T

Stage II

- CTH F
 - Alternative description and discussion
 - Agency and public comment
 - Conclusion
 - Alternative diagrams
 - Preferred alternative plan and profile

- STH 77
 - Alternative description and discussion
 - Agency and public comment
 - Conclusion
 - Alternative diagrams
 - Preferred alternative plan and profile

- CTH F
 - Alternative description and discussion
 - Agency and public comment
 - Conclusion
 - Alternative diagrams
 - Preferred alternative plan and profile

Appendix

- Comments from LOMs
- Comments from PIMs
- Alternative Matrix

Stage I

Executive Summary

USH 53 is a Corridors 2020 Backbone route between Superior and Eau Claire and is in the WisDOT Connections 2030 Draft Plan noted for Expressway upgrades or Freeway conversion. Between the communities of Rice Lake and Superior USH53 is currently built to an expressway design with the majority of the access being at-grade intersections. A number of the intersections along the corridor are experiencing injury and fatal crashes at an above average rate. To reduce the number of crashes as well as maintain the mobility of this corridor, current and potentially higher crash areas will be analyzed for potential improvements. This USH 53 corridor was broken into six segments to be evaluated.

This report covers the segment that begins just south of Lampson and continues north to just south of Gordon. Within this area three at-grade intersections were selected to be studied for upgrading to interchanges. These intersections are CTH F near Lampson, STH 77 in Minong and CTH T in Wascott.

Three different alternatives for the CTH F intersection were presented to the public for consideration. Alternative three was selected as the preferred alternative due to having the least misdirection for local traffic and minimal environmental impacts along with options for staging interchange upgrade over time.

Six alternatives were presented for the STH 77 intersection. A wide variety of configurations and locations for the interchange were considered. Alternative 5 was selected as the preferred alternative with the addition of an overpass at Schell Creek Road based on the comments received as well as the evaluation of the impacts.

Three alternatives for the CTH T intersection in Wascott were presented to the public. A fourth alternative was developed as a result of the comments received at the public meeting. Alternative 3 was selected as the preferred alternative because of the reduced impacts to the natural environment as well as the ability to stage the construction of the interchange upgrade over years.

Milestones

- Introductory LOM
- Introductory PIM
- Stage I report
- Stage I LOM
- Stage I PIM
- Stage II report
- Stage II LOM
- Stage II PIM
- Environmental Assessment
- Public Hearing
- Recording of Official Map

Background

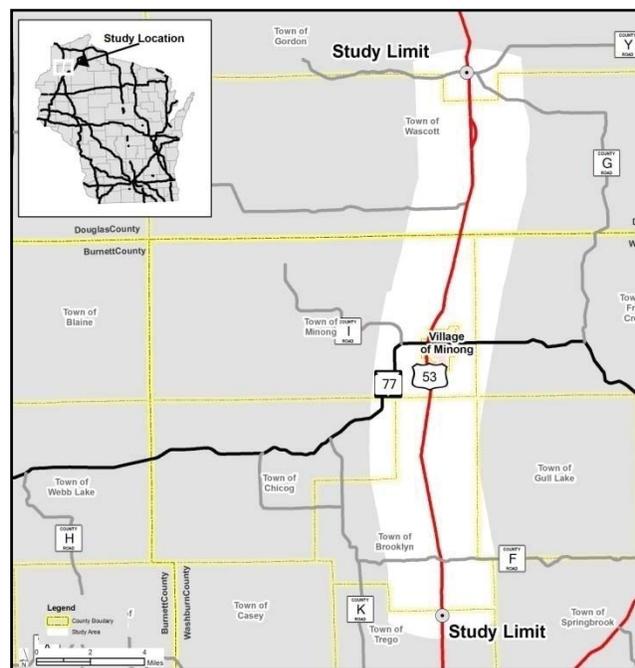
Purpose and Need

USH 53 is a Corridors 2020 Backbone route between Superior and Eau Claire and is in the WisDOT Connections 2030 Draft Plan noted for Expressway upgrades or Freeway conversion. Between the communities of Rice Lake and Superior USH53 is currently built to an expressway design with the majority of the access being at-grade intersections. A number of the intersections along the corridor are experiencing injury and fatal crashes at an above average rate. The purpose of the USH 53 Corridor Preservation Studies is to develop long-term solutions for the USH 53 corridor. The USH 53 corridor was broken into six segments to be evaluated. The goal for the project is to officially map future R/W for improvements to address the safety and/or mobility concerns along the corridor.

Study Limits

This USH 53 Corridor Preservation Study is for approximately 18.5 miles around the Minong Area. It begins 2 miles south of CTH F in the Town of Brooklyn in Washburn County and runs northerly to the Wascott/Gordon Town line in Douglas County. The study area limits also extend approximately one mile east and west from US 53.

Communities in the study area are the towns of Brooklyn, Minong, Wascott, and the Village of Minong.



Existing Facility

The USH 53 corridor in the segment is a rural four lane divided roadway with several at-grade intersection with state, county and local roads as well as private driveways. All of the access points are stop controlled, with no control on mainline. This portion of USH 53 was designated as an expressway in 1992 and has a posted speed limit of 65mph. This segment averages an AADT of 5200 for mainline and side road volumes ranging from 2400 to less than 100 AADT.

Factors Effecting Alternative Development

Desired Facility

The desired type of facility in the segment is to remain as an expressway. This segment of the USH 53 corridor has a minimal number of local roads that parallel the highway, a number or town roads that are dead ends, and numerous parcels abut the highway that do not have access to local roadways. These conditions along with the low traffic volumes on the majority of the local roads

converting to freeway would not be cost beneficial. Higher volume at-grade intersections or existing high crash rate intersections would be replaced with grade-separated intersections. Private and public intersections along USH 53 within 1-½ miles of interchanges would be closed. The County and Town road intersections that would be closed would either be converted to a cul-de-sac or additional roadways would be built to ensure continued connectivity on the local road system. Private access points that would be removed would have a variety of alternatives that would be considered, and a final determination would be made at the actual time of closure as to the best alternative. The choices would be providing alternative access to a local road, purchasing access rights and the owner provide alternate access, or the purchase of the entire parcel.

Corridor Constraints

Along this segment of the USH 53 corridor there are a variety of constraints that affect the alternatives at each of the proposed interchange locations. The majority of this corridor is in a rural setting with USH 53 providing much of the connectivity for the local road system. A reduction of access to the corridor would require the development of a significant number of miles of off system roadways to create connectivity of the local road system. These additional roadways would often be through large tracts of undeveloped land as well as environmentally sensitive areas. Businesses and residential development has occurred along the corridor as well as at the higher volume intersections. The change in type of access at these higher volume intersections will change the access to the businesses and residences with some possible additional travel distances.

Alternative Descriptions and Discussions

The corridor was evaluated based on traffic volumes, land use, and current and potential high crash locations. Three intersections were noted as having higher volumes, higher crash rates or a potential for a higher crash rate. The three intersections are CTH F near Lampson, STH 77 in Minong, and CTH T in Wascott.

CTH F

Description and discussion:

CTH F currently intersects USH 53 at two intersections located approximately 1000 feet apart. The volumes on the east leg are approaching 1000 AADT. Some of the constraints that were noted prior to the development of alternatives were Silver Lake and a historical building located in the NE quadrant, a business and five unnamed lakes on the west side on USH 53 near the intersections.

To meet the purpose for the project the two at-grade intersections should be replaced with a single grade separated intersection. Three possible locations near the existing intersections were considered for an interchange. These locations were at the northern existing intersection, between the two intersections and at the southern existing intersection. At each location a standard diamond configuration was considered first. If there were significant impacts caused by this typical configuration, alternate ramp configurations were looked at to see if it is possible to reduce the number or severity of those impacts.

With the topography falling away from USH 53 in both directions at this preliminary stage each of the alternatives evaluated with CTH F going under USH 53. Once a preferred location and configuration is determine an evaluation of going over rather than under will be completed. A preliminary review of the Brooklyn Town Hall, which is an old school house, indicated that it

would probably be eligible to be on the historic building registry. The town hall is located north side of CTH F on the east side of USH 53.

A standard diamond interchange located at the northern intersection would have possible impacts on the Town Hall, if not physically at least visually. CTH F on the east side of USH 53 would be realigned to the north along the original alignment of CTH F on the north side of the town hall. Changes in the ramp configurations either increased the impacts or did not overcome the advantages of the standard diamond and therefore the standard diamond at this location is Alternative 1 to be carried forward for further evaluation.

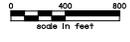
The second location considered locates an interchange between the two existing intersections. A standard diamond ramp configuration had some possible visual impacts to the town hall as well as creating a significant amount of misdirection for residents located between USH 53 and Silver Lake as well as some for commercial property located on the west side of USH 53. By folding the ramps of the east side to the south reduced some of the possible impacts to the town hall property as well as eliminated the significant misdirection for the NE quadrant by connecting a town road to CTH F at the same location as the ramp terminals. By folding the ramp terminals on the west side to the north it is possible to reduce the misdirection for the commercial property on the west side, but would require CTH F to be realigned for a little over ½ mile to the west. The benefits of folding the ramps on the west side were not as great as those on the east side and therefore two configurations at this location were carried forward as Alternatives 2 and 3. Alternative 2 folded the ramps on the east side to the south and folded the ramps on the west side to the north. Alternative 3 folded the ramps on the east side to the south, but kept a standard diamond configuration on the west side of USH 53.

The last location considered was at the southern intersection. An interchange at this location would require the relocation of CTH F to the west for a little over ½ mile. Also at this location the terrain does not lead toward an under design as the other locations do. Do to the existence of a small lake in the SW quadrant of this location the height of CTH F would be restricted to avoid placing fill in the lake, which would require a lowering of the profile of USH 53 to achieve the required clearance of CTH F. A standard diamond configuration would not be acceptable at this location due to the impacts to the lake in the SW quadrant as well as the misdirection to the resident in the NW quadrant, which is the same as that noted in the first two locations. The folding of the ramps at this location on both the west and east side could reduce these impacts, but would still require a business relocation and may also require a residential relocation, neither of which are required at the other two location. Therefore no alternative at this location are carried forward for further consideration.



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

04/17/08



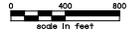
Alternative 1 - US 53 Corridor Preservation, Minong Area

CTH F Standard Diamond



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

04/17/08



Alternative 2 - US 53 Corridor Preservation, Minong Area

CTH F Folded Diamond, Loop in NW and SE Quadrant



04/17/08



Alternative 3 - US 53 Corridor Preservation, Minong Area

CTH F Folded Diamond, Loop in SE Quadrant

STH 77

Description and discussion:

STH 77 intersects USH 53 near the western village limits of Minong. This intersection has been included in other studies of the USH 53 corridor due to the higher number and severity of crashes occurring at this intersection.

When USH 53 was constructed as an expressway the alignment was moved to the western edge of the village with the old alignment becoming Business USH 53. New businesses have developed on the west side of the at-grade intersection since USH 53 was realigned to its current location. The median width at the current intersection is 150 feet rather than the 50 feet at most other at grade intersection along this segment of USH 53. STH 77 rises slightly to the east is fairly level to the west, so all of the alternative at this point will assume that STH 77 would be over USH 53.

To start with we began with the standard diamond configuration at the existing at-grade intersection. This configuration would require the relocation as at least two businesses and the possibility of four depending on a more detailed analysis of the slope intercepts. If the 3rd and 4th business, which are on the west side of USH 53 are not physically impact to a point of needing relocation there will be some impacts due to the misdirection that would be required due to access modifications. Since this type of interchange is the preferred design it will be taken forward to the local officials, public and agencies for comments as Alternate 1.

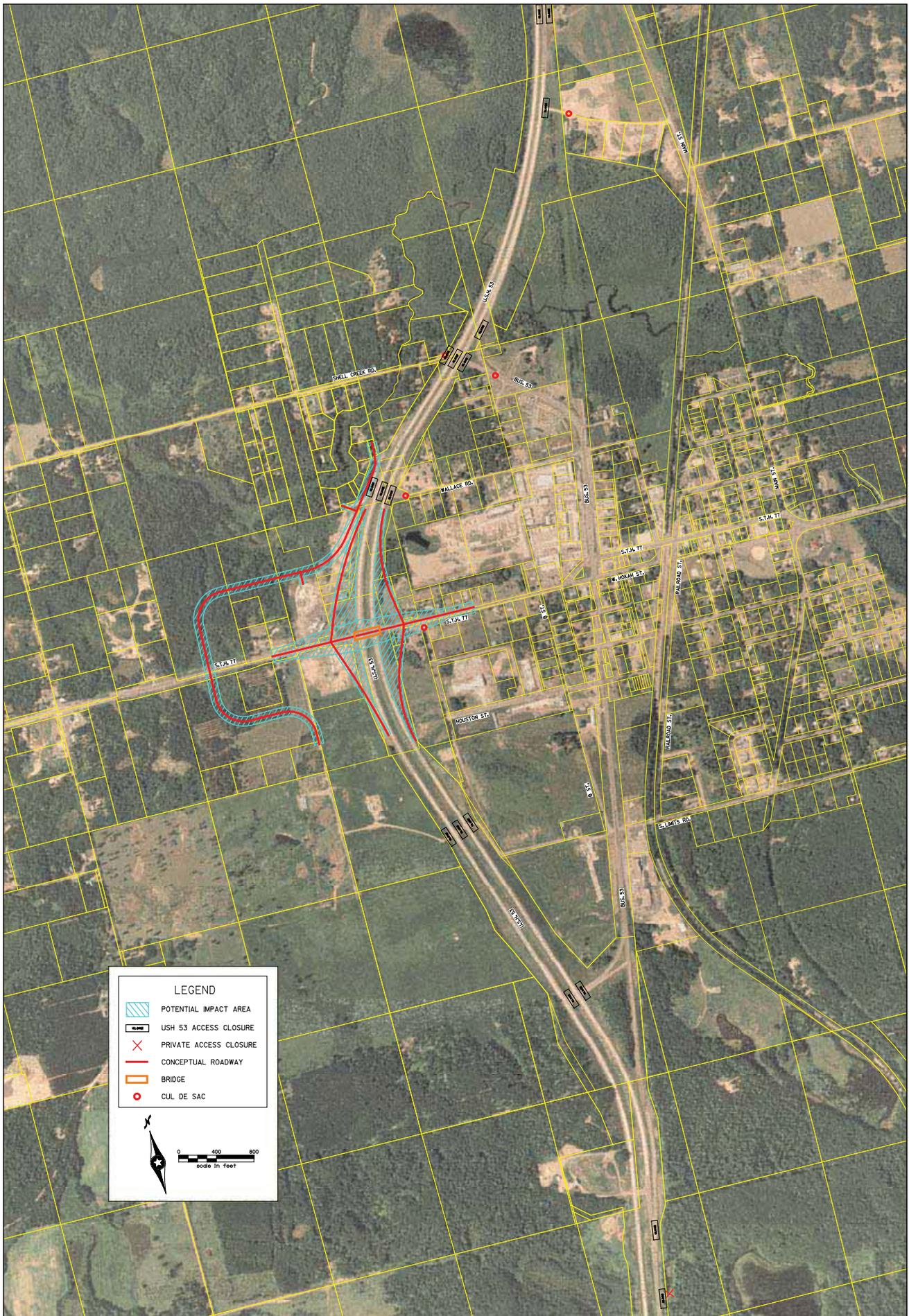
Second we looked for a standard diamond were located along the USH 53 corridor that would still provide access to the community and businesses as well as reduce the impacts that would occur using the existing intersection location. Locating the interchange to the south would have the least impact to the environment and community due to the alignment of STH 77 to the west and east. Moving the interchange to a new location would result in an extensive amount of new alignment of STH 77. To avoid business and residential impact as best as possible it would need to be moved about $\frac{3}{4}$ of a mile to the south. At this location STH 77 would need about $1\frac{1}{4}$ miles of new alignment to the west. To the east it could be tied into business USH 53 or possibly realigned to the east along the south edge of the community. To determine the best alignment for STH 77 would require further investigation, so it was decided that this interchange location would be carried forward without the alignment of STH 77 determined for local official, public and agencies for comments as Alternate 2.

From the first local official and public meeting a suggestion to use the north and south connection of business USH 53 as the access points to Minong was suggested. Along this segment of USH 53 the minimum spacing of interchanges is 3 miles eliminating the option of providing a full interchange at both the north and south location. Using the north and south ramp connections of Business USH 53 would require the creation of a split diamond interchange. The ramps at the north location would have a direct impact on shell creek as well as the extensive wetlands that surround the creek. Unless STH 77 was relocated an overpass would still be required at the existing intersection location. This could be constructed with minimal physical impact to the adjacent businesses, but access to and from USH 53 would be routed through the community to the east. This would also require some type of improvements to the existing STH 77/Business 53 intersection to accommodate the additional traffic. A connection from the northern to the southern $\frac{1}{2}$ interchanges on the west side of USH 53 would require about $1\frac{1}{2}$ miles of new alignment and an additional crossing of Shell Creek, so the routing of all the traffic through town was preferred with this design. This configuration will be brought forward for local official, public and agencies for comments as Alternative 3.

The development of Alternative 2 and 3 did reduce the physical impact to the commercial and residential properties, but could have larger economic impacts to the community and businesses not only along the corridor, but within the entire community as well. Therefore additional configurations at the existing intersection to try to reduce the impacts were considered. A compress diamond was looked at to reduce the impact to the surrounding businesses. This configuration did reduce the probability of two business relocations and will be carried forward for local official, public and agencies for comments as Alternative 4.

Next different configurations of folding the ramps into parclo configurations were looked at. On the east side of USH 53 by folding the ramps either to the north or south only changed to impacts, but did not reduce the impacts. On the west side of USH 53 by folding the ramps to the south the impacts would be reduce to a single business and no misdirection to the remaining business with the access road directly across from the ramp terminals. So an alternative was developed with the west ramps folded to the south and the east ramps keep as a diamond configuration pulled in tight to the overpass. This alternative will be taken to the local official, public and agencies for comments as Alternative 5.

A final configuration of a single point interchange was considered. A single point interchange would require the installation of traffic signal. This configuration would require the relocation of at least two businesses as well as create some misdirection for the remaining businesses. This alternative will be taken to the local official, public and agencies for comments as Alternative 6.



04/17/08



Alternative 1 - US 53 Corridor Preservation, Minong Area

STH 77 Standard Diamond



04/17/08



Alternative 2 - US 53 Corridor Preservation, Minong Area

STH 77 Standard Diamond with Realigned STH 77

LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL. DE. SAC

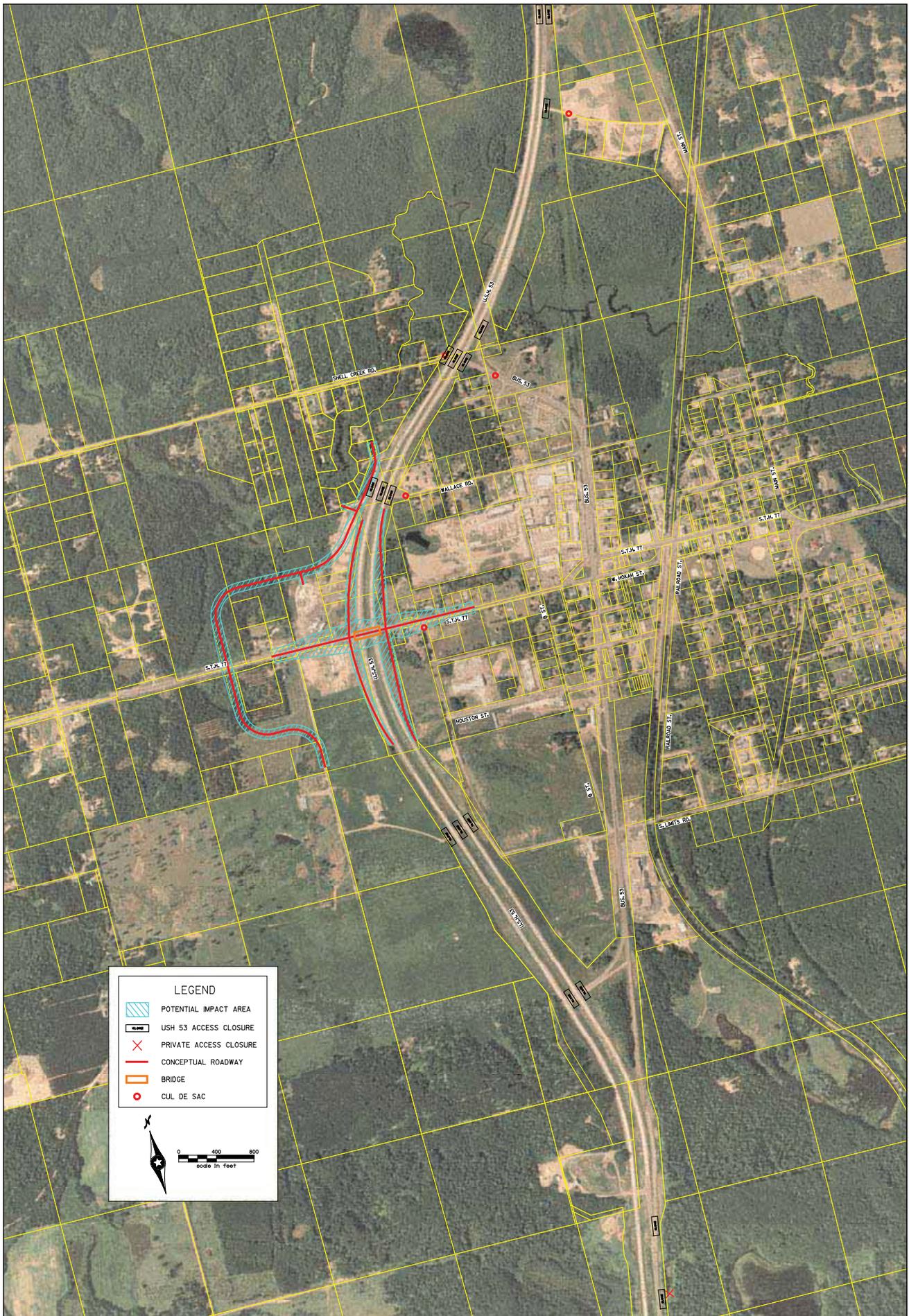


04/17/08



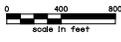
Alternative 3 - US 53 Corridor Preservation, Minong Area

STH 77 Split Diamond



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

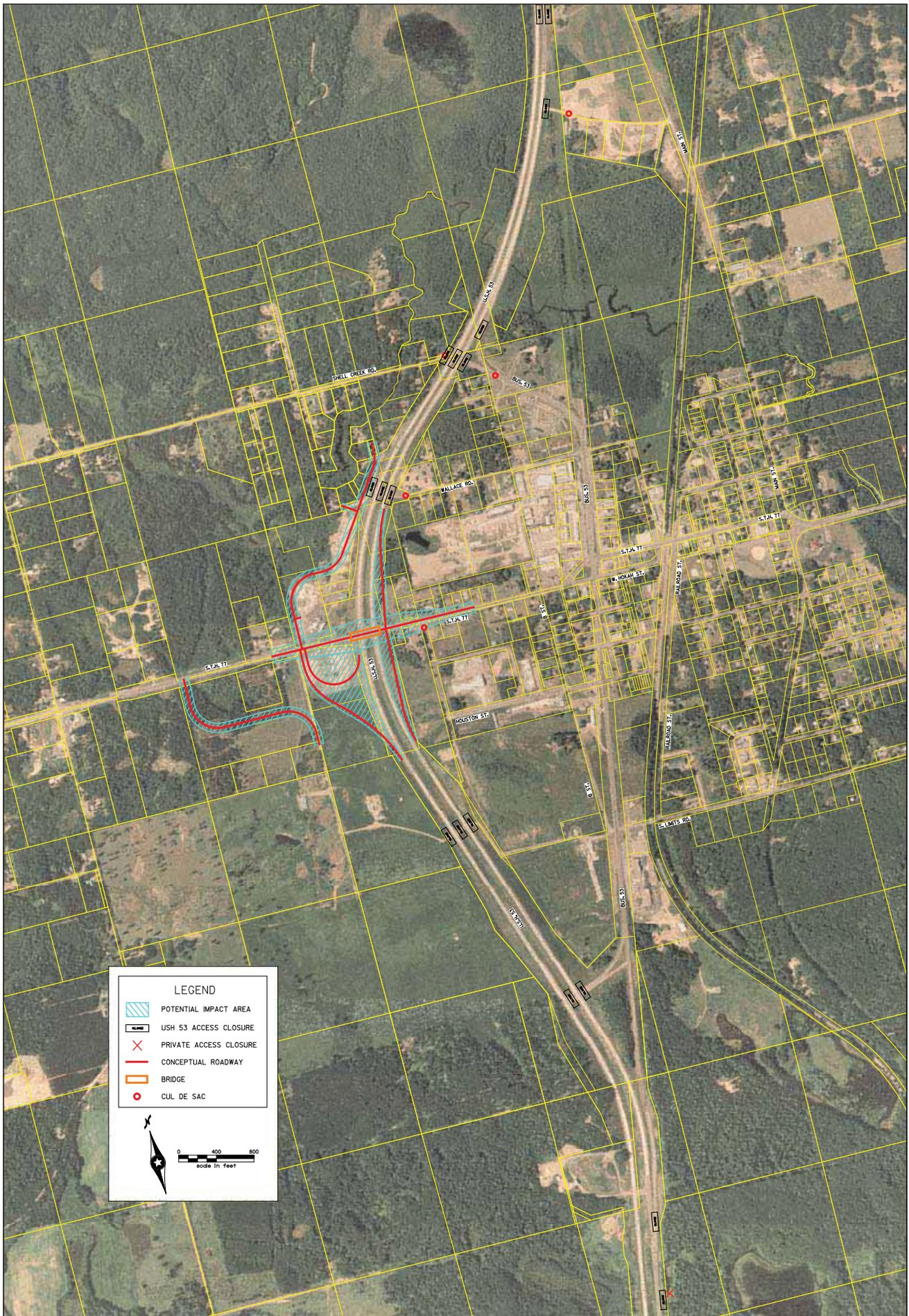
 

04/17/08



Alternative 4 - US 53 Corridor Preservation, Minong Area

STH 77 Tight Diamond



04/17/08



Corridor Preservation
Minong Area

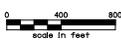
Alternative 5 - US 53 Corridor Preservation, Minong Area

STH 77 Folded Diamond, Loop in SW Quadrant



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

04/17/08



Corridor Preservation
Minong Area

Alternative 6 - US 53 Corridor Preservation, Minong Area

STH 77 Single-Point

CTH T

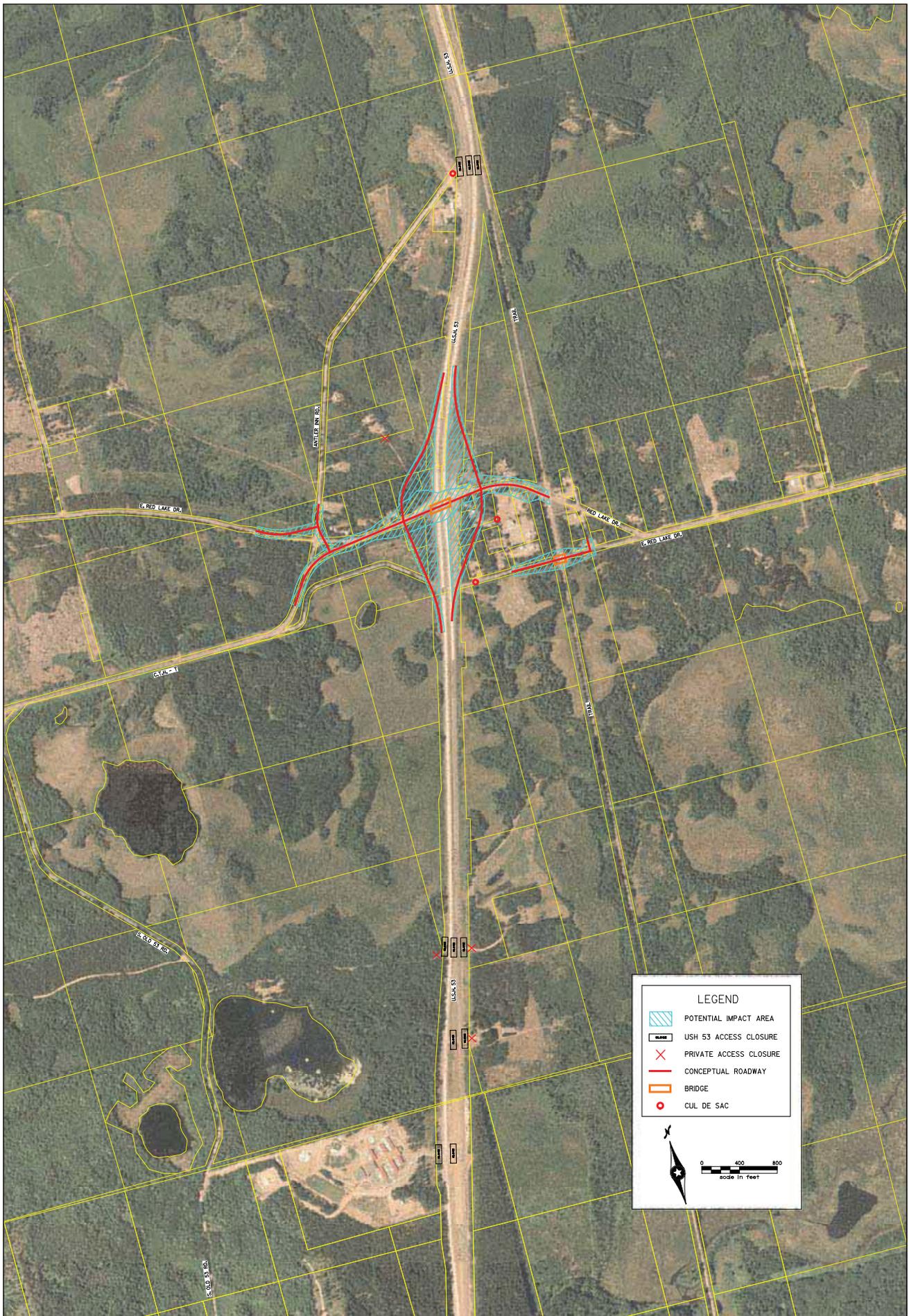
Description and discussion:

CTH T currently intersects USH 53 on the west side with Red Lake Drive on the east side. This intersection was chosen to have a grade separated intersection because of the proximity of the Northwoods School which is located approximately 1 ¼ miles to the south. The school's only access is directly onto USH 53. The unincorporated community of Wascott is also located at this intersection. The topography in the area is a ridge that runs east and west across USH 53 with swamps to the north and south of CTH T and Red Lake Drive. Therefore all of the alternative will look at an overpass at this time.

The first interchange configuration is the standard diamond configuration located at the existing intersection. This configuration requires a business relocation as well some residential relocations. The alternative will be taken to the local official, public and agencies for comments as Alternative 1.

Folding the ramps on either side of USH 53 at this location did not reduce the impact, but only changes them. To reduce the impact to the community a second location for the interchange less than ¼ mile to the south was considered. This location is the original alignment of Red Lake Drive. A standard diamond at this location would reduce the relocation to a single residence. The alternative will be taken to the local official, public and agencies for comments as Alternative 2.

Alternative 2 reduce the relocations, but the most direct alignment of CTH T crosses a small section of open water so a alternate alignment was developed to avoid this natural resource. Drive. A standard diamond at this location would reduce the relocation to a single residence. The alternative will be taken to the local official, public and agencies for comments as Alternative 3.

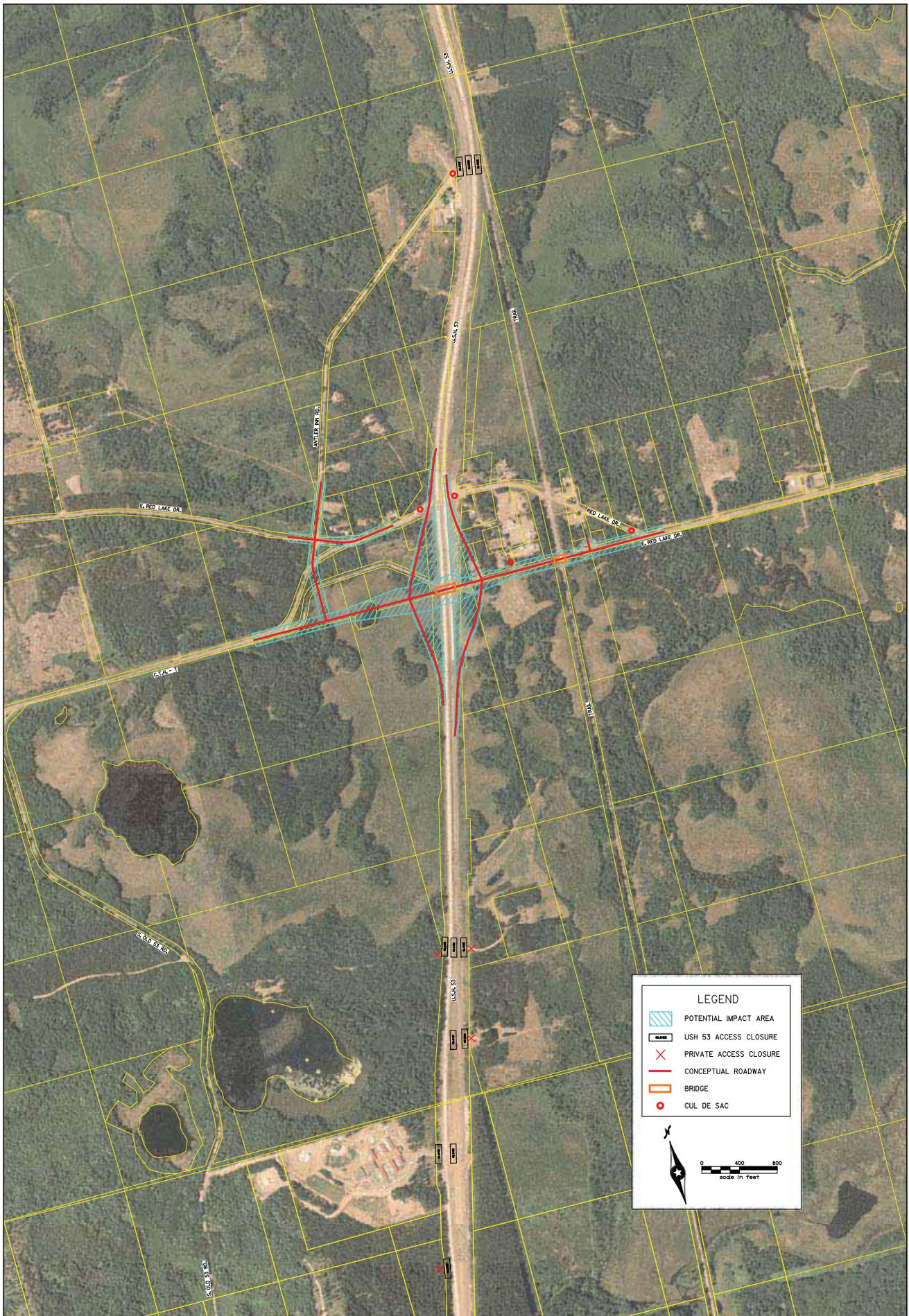


04/17/08



Alternative 1 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond

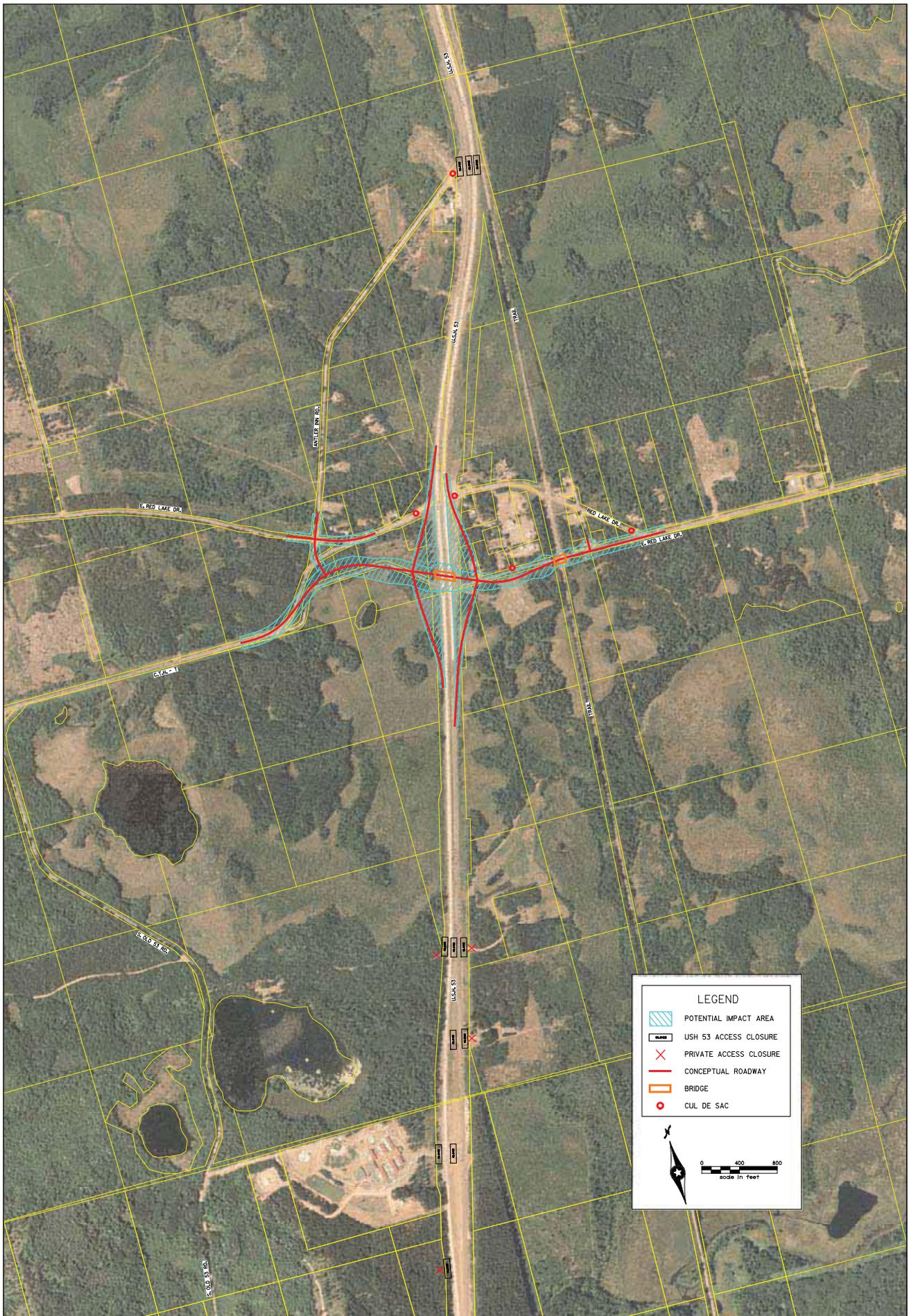


04/17/08



Alternative 2 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond with Realigned CTH T (Option 1)



04/17/08



Corridor Preservation
Minong Area

Alternative 3 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond with Realigned CTH T (Option 2)

Stage II

CTH F

Description and discussion:

Alternative 1:

Alternative 1 consists of placing a diamond interchange at the existing north intersection of CTH F. The east leg of CTH F would be relocated to travel along the old alignment of CTH F. To the south of the proposed interchange no town roads are within 1-½ miles and therefore only closures of private access points would be necessary south of this location. The parcels that have direct access do not abut a town road and have therefore been marked as needing to be closed by either purchasing the access and the owner provide their own alternative access, provide the alternative access for the property owner, or purchase the property in entirety. The preferred method of closing these accesses would be determined during the design/construction phase. Most of these accesses are woods and field entrances with minimal traffic.

To the north of the proposed interchange location, two town roads intersect USH 53 within 1 ½ miles. Birchwood Drive and Palmer Drive intersections would need to be closed. Palmer drive to the east would be closed and access to CTH F would be via Lakeside road on the east side of Silver Lake. Birchwood Drive on the east side would be connected to Palmer Drive again providing access to CTH F via Lakeside Rd. Silver Lake restricts the possibility of connecting both of these roadways directly to CTH F while still achieving the required spacing of intersections from the ramp terminal of ¼ of a mile. The only private access north of the proposed interchange would be served with the construction of the new town road connecting Palmer and Birchwood Drives on the east side of USH 53. The furthest additional travel required to access USH 53 on the east side would be less than 3 miles.

Birchwood drive on the west side on USH 53 is a dead end and therefore would need to be connected to another route to provide access. A connection to CTH F to the south would be constructed that would provide at least ¼ of a mile of spacing from the ramp terminals. Palmer Drive to the west does connect to another town road, but the additional travel required to access USH 53 would be nearly 7 miles. It was felt that this would be excessive so a connection between Palmer and Birchwood was also developed. This would then provide connection to CTH F with about 1 mile on redirection.

Alternative 2:

Alternative 2 consists of placing an interchange approximately half way between the two existing intersections along with the realignment on CTH F on the west side for approximately ½ mile. The ramps would be a parclo-A design with the east side ramps folded to the south and the west side ramps folded to the north. The modifications to the access points to the south are the same as in Alternative 1. By folding the ramps to the south on the east side, Birchwood Drive would be able to connect directly to CTH F at the ramp terminal, eliminating the necessity of building the town road connection between Birchwood and Palmer Drives. With the ramp configuration on the west side of USH 53 folding the ramps to the north, redirection of travel to the business in the SW quadrant would be reduced, but this configuration would require the realignment of CTH F to reduce the impacts to the many wetland areas located along the west side of USH 53. The closure of Birchwood and Palmer drives on the west side of USH 53 would require the same additional town road connections as discussed in Alternative 1.

Alternative 3:

Alternative 3 also consists of placing an interchange approximately half way between the two existing at-grade intersections. The ramp configuration is a modified parclo with the east side folded to the south and the west side as a standard diamond configuration. This would have the

same advantages on the east side allowing the connection of Birchwood Drive directly the CTH F as in Alternative 2. The access closures to the south of the interchange as well as the closure of Birchwood and Palmer Drives on the west side would require the same connections as Alternatives 1 & 2. An additional town road would be required in the SW quadrant to provide access to the existing business located on the east side of the existing southern at-grade intersection.

Agency and public comment:

The DNR comments received expressed the same concerns for all of the alternatives. These comments noted the development of a town road between CTH F and Birchwood Drive on the west side of USH 53. This roadway would cause fragmentation of wildlife habitat, increase and change the rate of storm water runoff to wetlands as well as directly impact a wetlands complex near Birchwood Drive. A field review with the DNR was completed looking at a route about ¼ of a mile to the west of what is show on the alternative drawings. Also noted were impacts to wetlands developed by WisDOT as possible mitigation during the construction of the expressway. These wetland areas are located at the current intersection of CTH F and Birchwood Drive and in the ditchline along the east side of USH 53 to the south of CTH F. The DNR did not accept these locations as mitigation sites. Also noted were possible impacts to Silver Lake, adjacent floodplain and increased runoff from ramps constructed near the lake.

No comments were received from the public officials on any of these alternatives; however they did rank them with all three being the preferred.

Public comments were received on all three alternatives. The main comments were the preference of alternatives 2 and 3 to provide better access to Birchwood Drive on the east side and the location of the new town road between CTH F and Birchwood Drive on the west side. The town road location shown in the alternatives impacts a house. This is also why alternatives to the west were field reviewed in conjunction with the DNR. The public ranked all three alternatives close to the same.

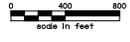
Conclusion:

After reviewing the comments received as well as the alternative evaluation matrix each of the alternatives more impact that was considered reasonable for this location since it currently does not have crash or mobility concerns. Therefore at this location an underpass with jug handles to access USH 53 with right in/right outs will be adequate to provide increased safety at this location. With this type of grade separated intersection the town other access along USH 53 are not effected as they would be with an interchange and therefore do not need to be closed. The underpass would be on the same alignment as Alternative 3 to reduce the impact to the old school house property and reduce the amount of realignment of CTH F. The existing southern intersection would be used as the jug handle for the east side and a new connection would be constructed on the west side to the south of CTH F. The access to the business to the west of the southern intersection would be closed and realigned to access the newly constructed jug handle. This alternative is listed as Alternative 4 in the following diagrams. A preliminary plan was developed for the overpass and jug handles, which were reviewed by PDS. Following the review, design modifications were made to address the comments from the review.



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

04/17/08



Alternative 1 - US 53 Corridor Preservation, Minong Area

CTH F Standard Diamond



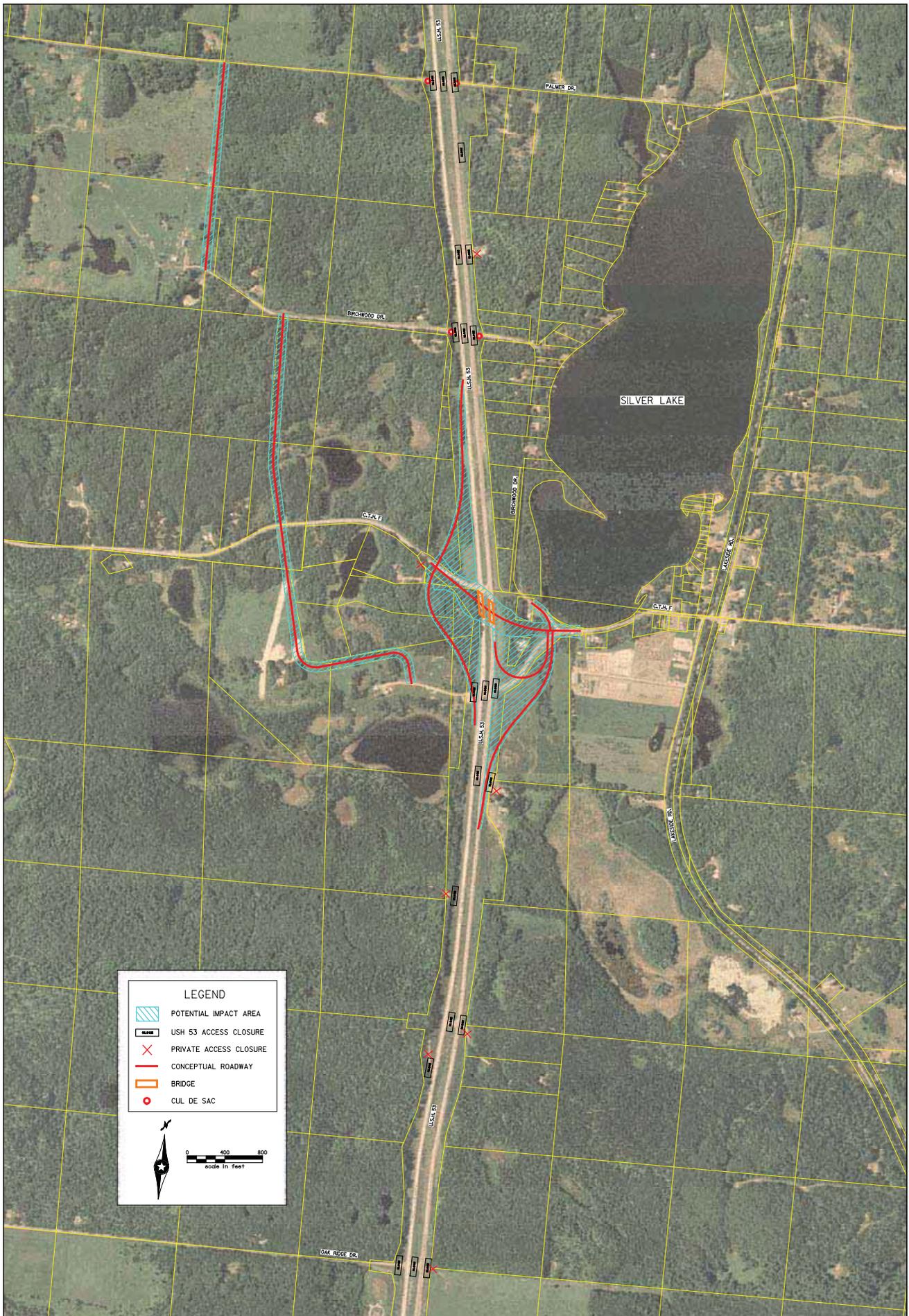
04/17/08



Corridor Preservation
Minong Area

Alternative 2 - US 53 Corridor Preservation, Minong Area

CTH F Folded Diamond, Loop in NW and SE Quadrant

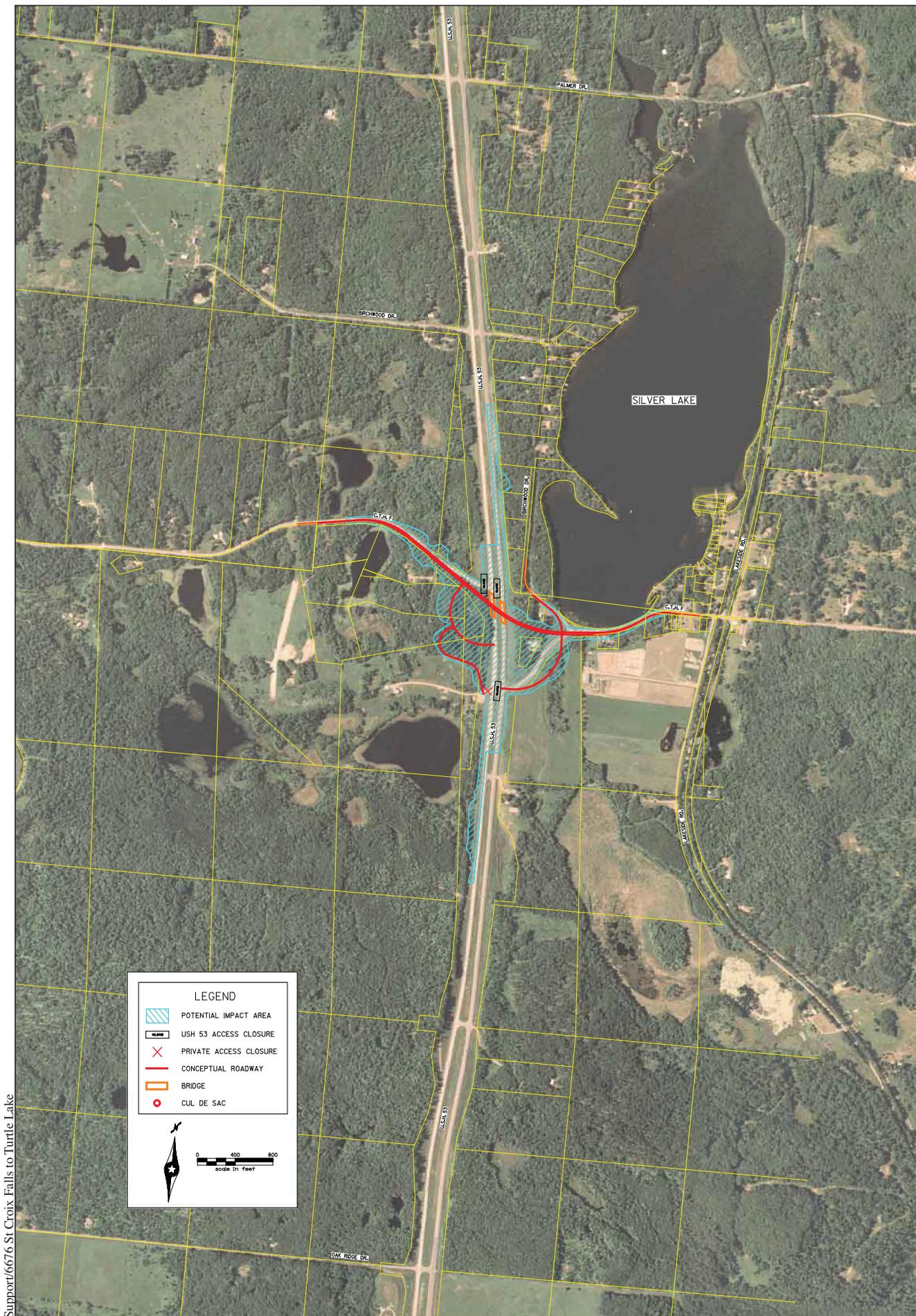


04/17/08



Alternative 3 - US 53 Corridor Preservation, Minong Area

CTH F Folded Diamond, Loop in SE Quadrant



Support/6676 St. Croix Falls to Turtle Lake

LEGEND

- POTENTIAL IMPACT AREA
- USH 53 ACCESS CLOSURE
- PRIVATE ACCESS CLOSURE
- CONCEPTUAL ROADWAY
- BRIDGE
- CUL DE SAC




scale in feet

06/18/09



Alternative 4

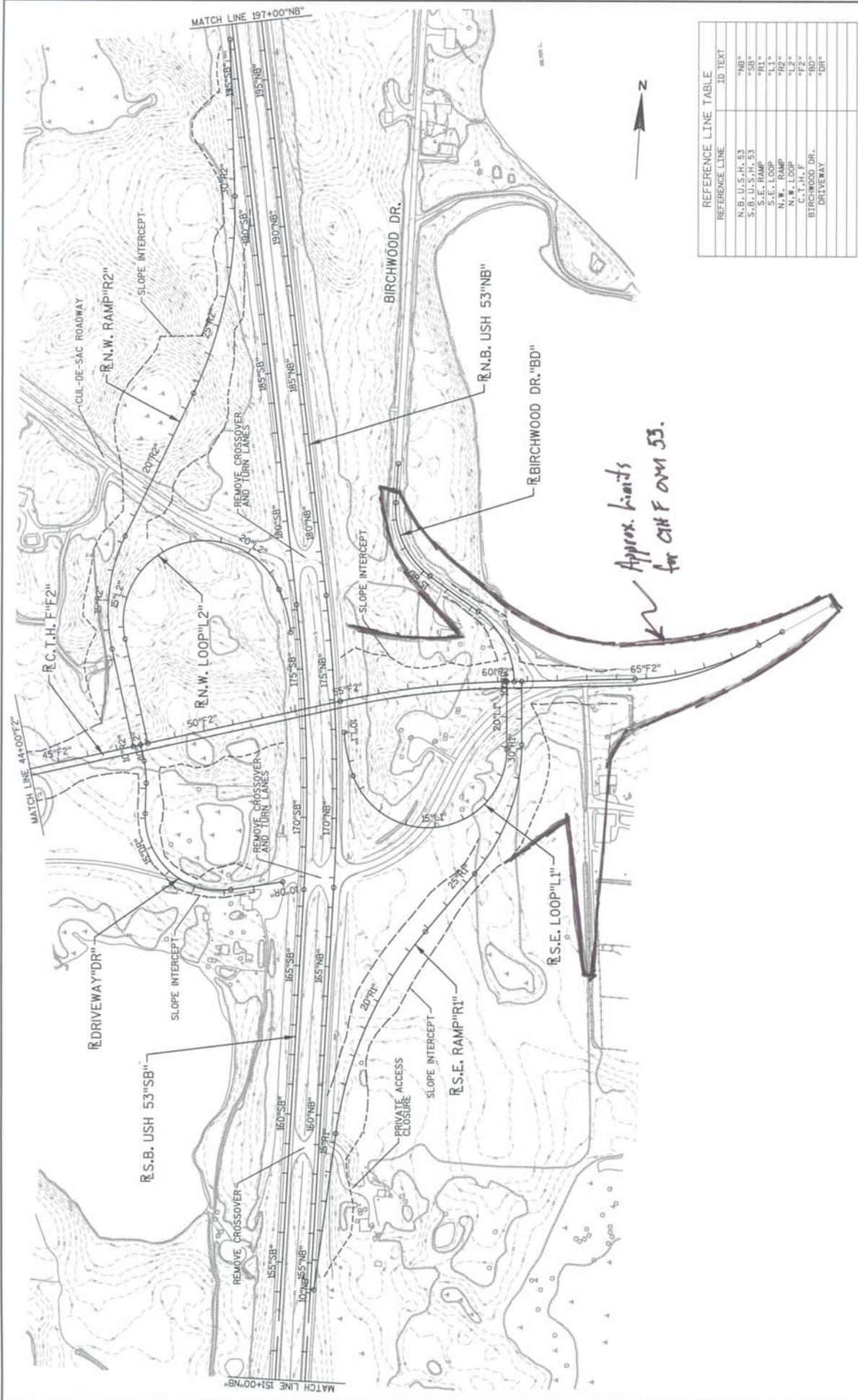
CTH F Jug Handle

CTH F

Over

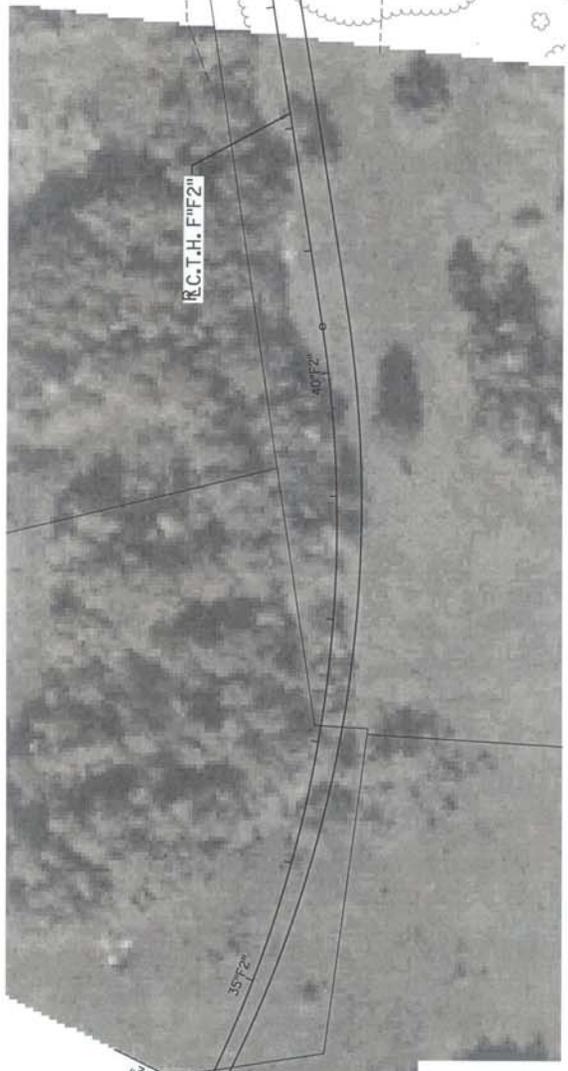
VS

Under



REFERENCE LINE	ID TEXT
N.B. U.S.H. 53	"NB"
S.B. U.S.H. 53	"SB"
S.E. RAMP	"R1"
S.E. LOOP	"L1"
N.W. LOOP	"L2"
C.T.H. F	"F2"
BIRCHWOOD DR. DRIVEWAY	"BD"
	"DR"

NAME CTHF-2
 PI STA 35+36.15'F2"
 X = 754,833.204
 Y = 625,064.525
 DELTA = 62° 02' 36" (LT)
 T = 100'
 D = 202.48'
 L = 104.174
 PC STA 29+09.65'F2"
 X = 754,387.731
 Y = 625,594.902
 P = 100'
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 Y = 625,238.042
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 DA = N 73° 55' 14" E



5

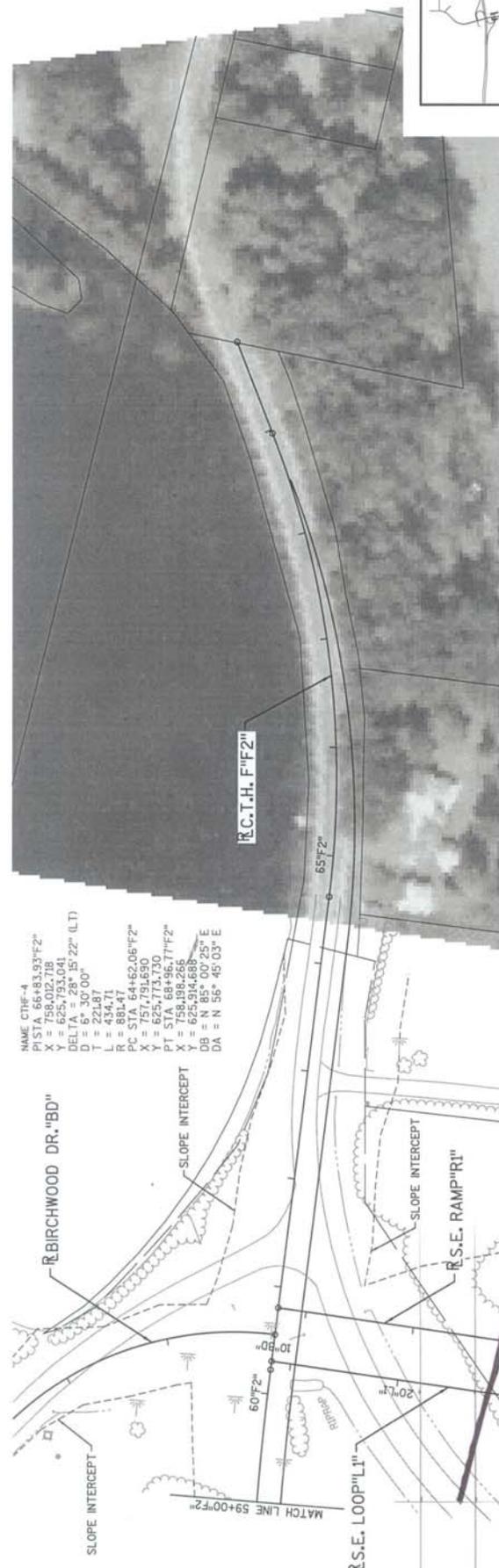
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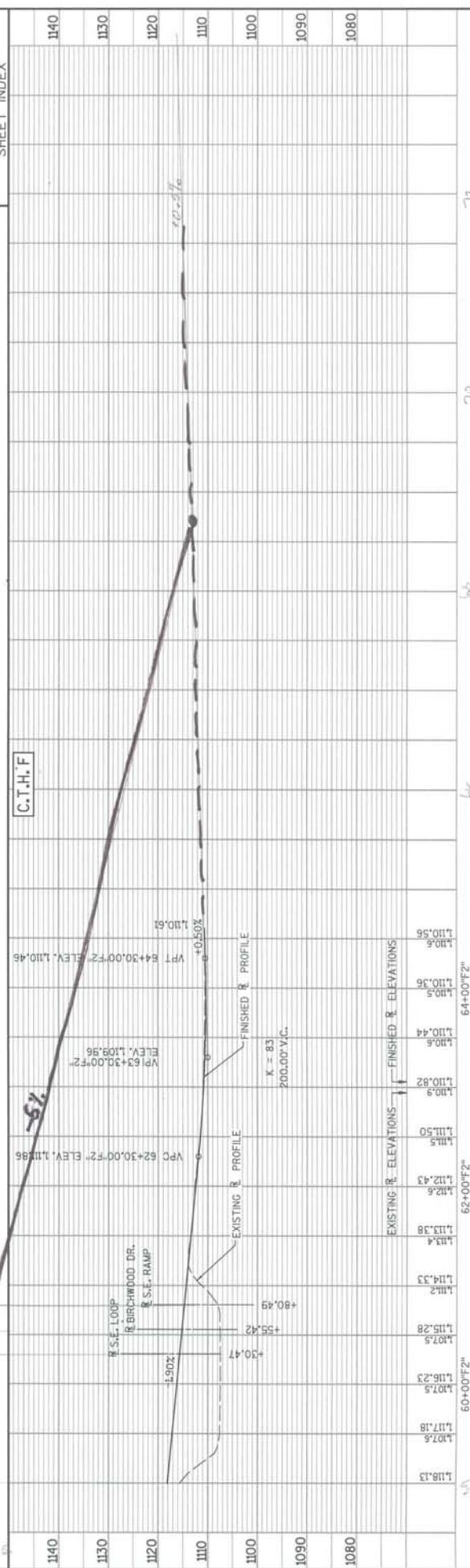
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40+00'F2"	1128.47	1128.47	
42+00'F2"	1128.98	1129.37	
44+00'F2"	1129.37	1129.37	
46+00'F2"	1129.63	1129.77	
46+50'F2"	1130.3	1131.35	
47+00'F2"	1130.63	1131.35	
48+00'F2"	1130.98	1131.35	
49+00'F2"	1131.35	1131.35	
50+00'F2"	1131.70	1131.35	
51+00'F2"	1132.05	1131.35	
52+00'F2"	1132.40	1131.35	
53+00'F2"	1132.75	1131.35	
54+00'F2"	1133.10	1131.35	
55+00'F2"	1133.45	1131.35	
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PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET: 1" = 100.0000 FT / IN.
 SHEET: E

PLAN AND PROFILE
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 R.C.T.H.F.F2"
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 PLOT DATE : 12/5/2008
 PLOT BY : SRF Consulting Group



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 Y = 625,793.041
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 D = 6° 30' 00"
 T = 224.87
 L = 881.47
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 X = 751,791.690
 Y = 625,773.730
 PT STA 68+96.77' F2"
 X = 750,998.266
 Y = 625,773.730
 DB = N 85° 00' 25" E
 DA = N 56° 45' 03" E



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1110	1110.82	1110.82
1100	1111.50	1111.50
1090	1112.43	1112.43
1080	1113.38	1113.38
1075	1113.4	1113.4
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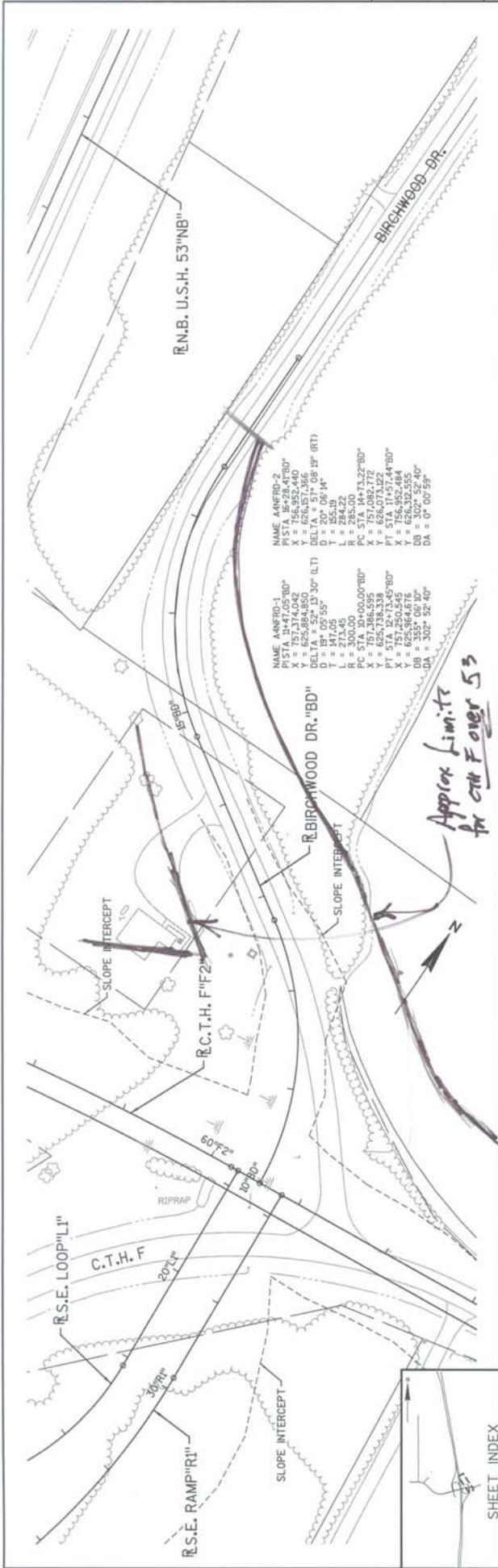
PLAN AND PROFILE

COUNTY: WASHBURN

HWY: U.S.H. 53

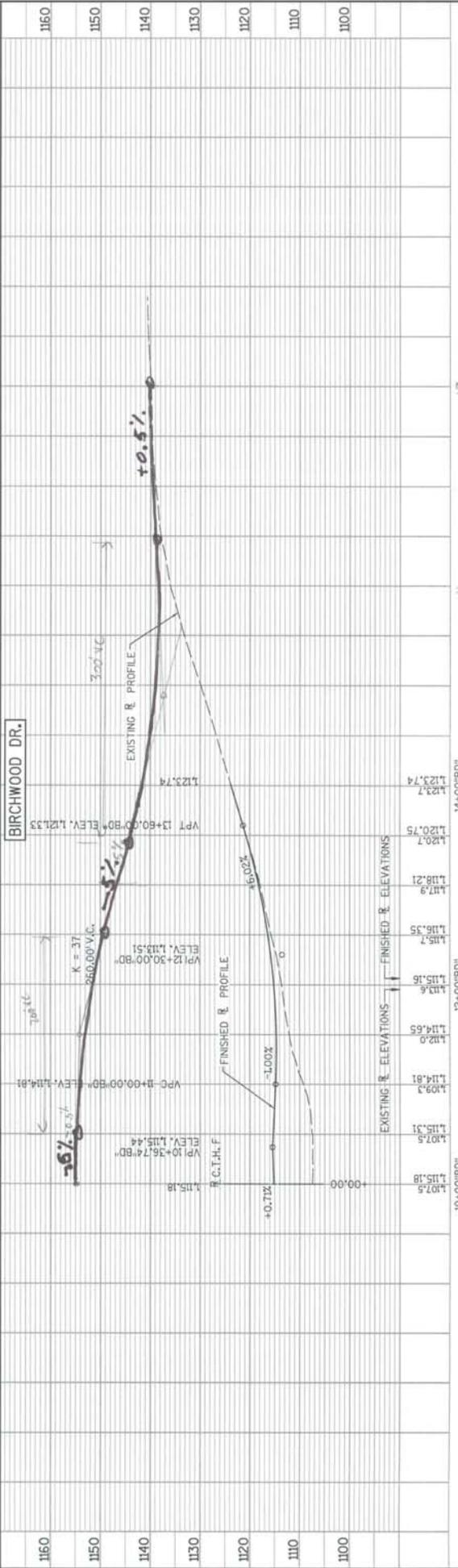
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PROJECT NO: 1190-01-00 HWY: U.S.H. 53 COUNTY: WASHBURN

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PRELIMINARY DESIGN

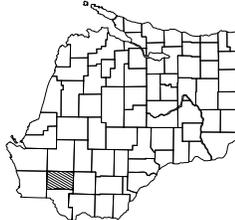
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C/T-H OVERPASS - ALTERNATIVE 4 WASHBURN COUNTY

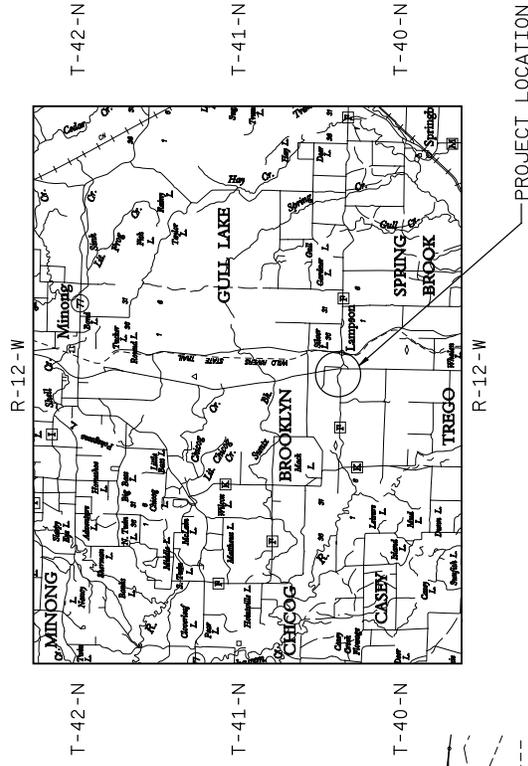
ORDER OF SHEETS

Section No. 1	Title Sheet
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right-of-Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

STATE PROJECT	FEDERAL PROJECT
PROJECT	CONTRACT



STATE PROJECT NUMBER
1190-01-00



- PROFILE**
- GRADE LINE
 - MARSH OR ROCK PROFILE (To be noted as such)
 - SPECIAL DITCH
 - GRADE ELEVATION
 - CULVERT (Profile View)
- UTILITIES**
- ELECTRIC
 - FIBER OPTIC
 - GAS
 - SANITARY SEWER
 - STORM SEWER
 - TELEPHONE
 - WATER
 - UTILITY PEDESTAL
 - POWER POLE
 - TELEPHONE POLE

- CONVENTIONAL SYMBOLS**
- PLAN
 - CORPORATE LIMITS
 - PROPERTY LINE
 - LOT LINE
 - LIMITED HIGHWAY EASEMENT
 - EXISTING RIGHT OF WAY
 - PROPOSED OR NEW R/W LINE
 - SLOPE INTERCEPT
 - REFERENCE LINE
 - EXISTING CULVERT
 - PROPOSED CULVERT (Box or Pipe)
 - COMBUSTIBLE FLUIDS
 - MARSH AREA
 - WOODED OR SHRUB AREA

SCALE 0 4 MI.
LAYOUT

TOTAL NET LENGTH OF CENTERLINE = ML
Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS) - Washburn County. Elevations are based on NGVD 29.

ORIGINAL PLANS PREPARED BY
SRI Consulting Group, Inc.

DATE _____ (Signature) _____

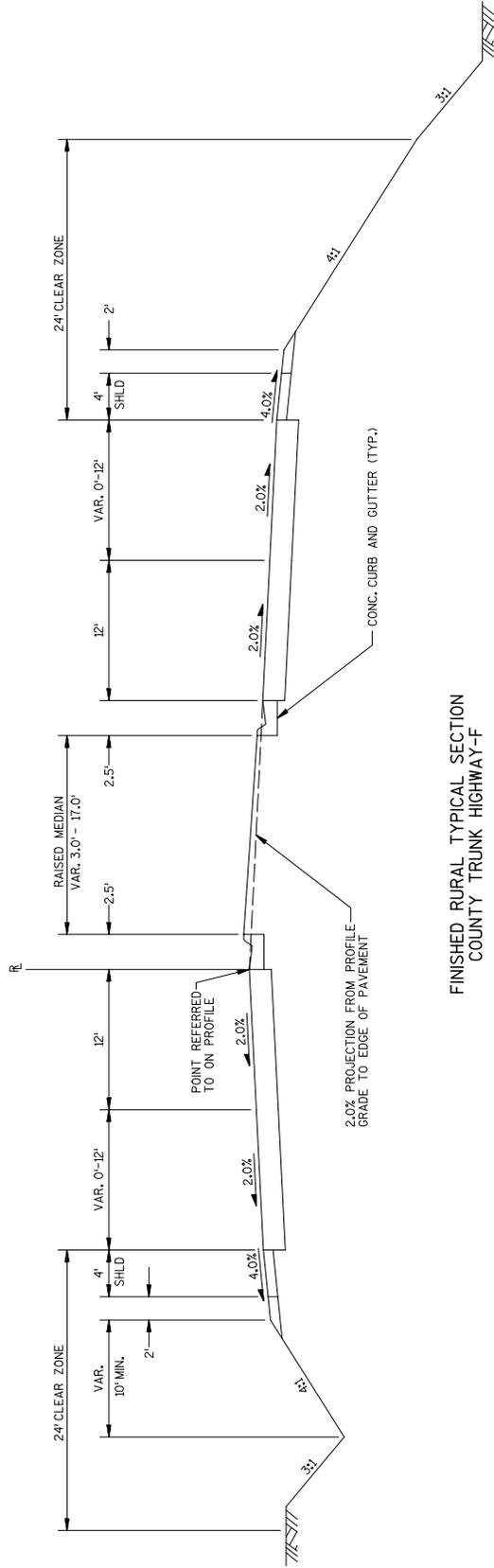
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor _____
Designer _____
Project Manager _____
Regional Examiner _____
Regional Supervisor _____
C.O. Examiner _____

APPROVED FOR THE DEPARTMENT
DATE _____ (Signature) _____

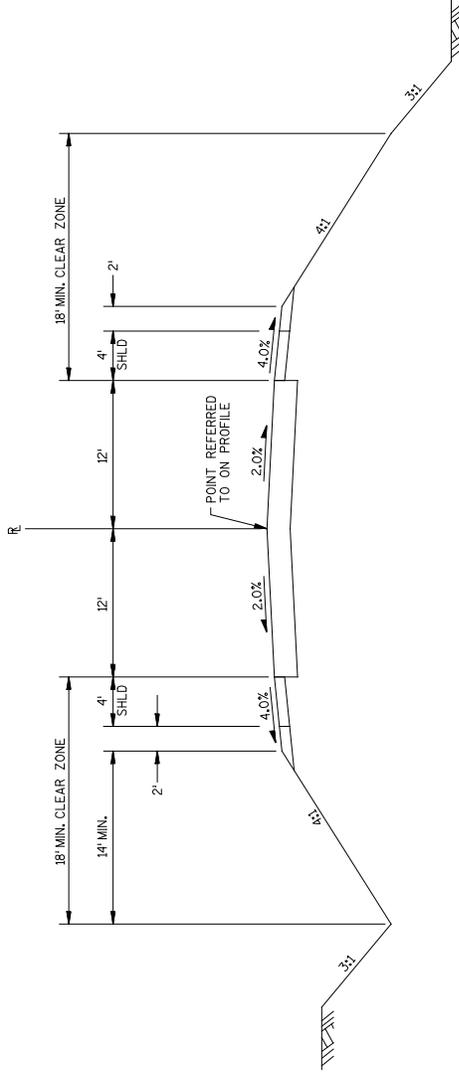
PROJECT ID:
WITH: N/A

COUNTY: WASHBURN



FINISHED RURAL TYPICAL SECTION
COUNTY TRUNK HIGHWAY-F

DESIGN SPEED = 45



FINISHED RURAL TYPICAL SECTION
U.S.H. 53 EXIT/ENT. ROADWAYS

DESIGN SPEED = 30

PROJECT NO: 1190-01-00

HWY: U.S.H. 53

COUNTY: WASHBURN

TYPICAL SECTIONS

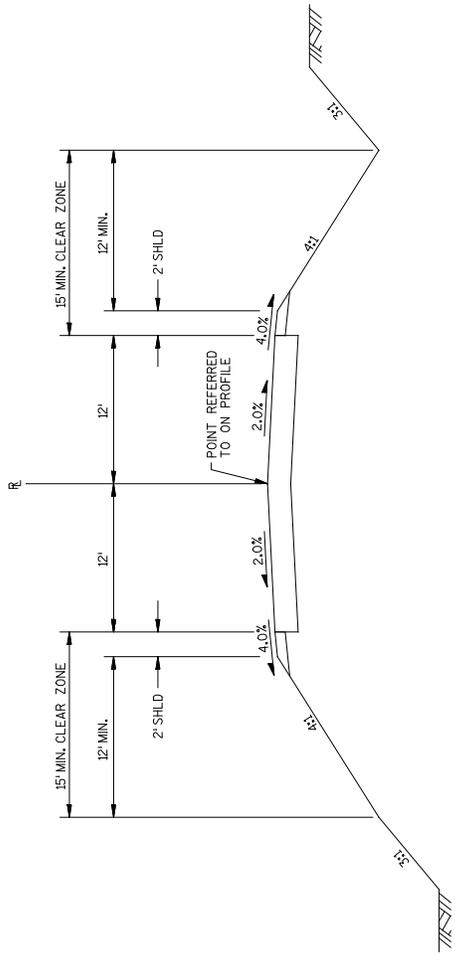
SHEET

FILE NAME : h:\pro\jmden\6190\h1-mb\plan\020301-ts-03.dgn

PLOT BY : SRF Consulting Group

PLOT SCALE : 10,000 SF / IN.

E



**FINISHED RURAL TYPICAL SECTION
LOCAL ROADS**
DESIGN SPEED = 30

PROJECT NO: 1190-01-00

HWY: U.S.H. 53

COUNTY: WASHBURN

TYPICAL SECTIONS

SHEET

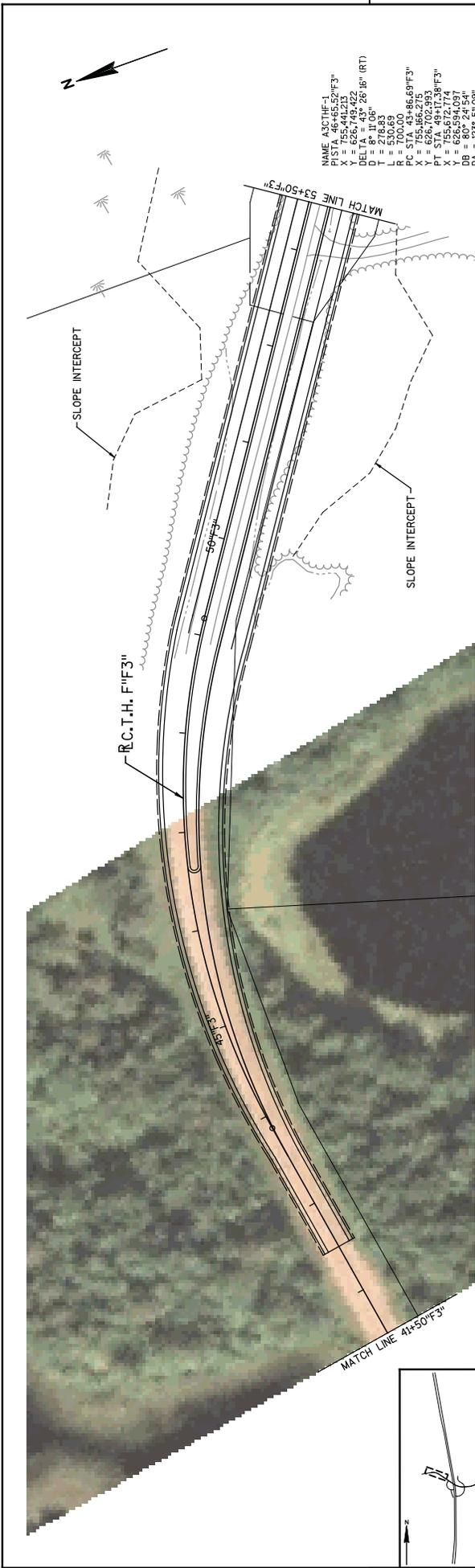
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PLOT DATE : 5/28/2009

PLOT BY : SRF Consulting Group

PLOT SCALE : 10,000 SF / IN.

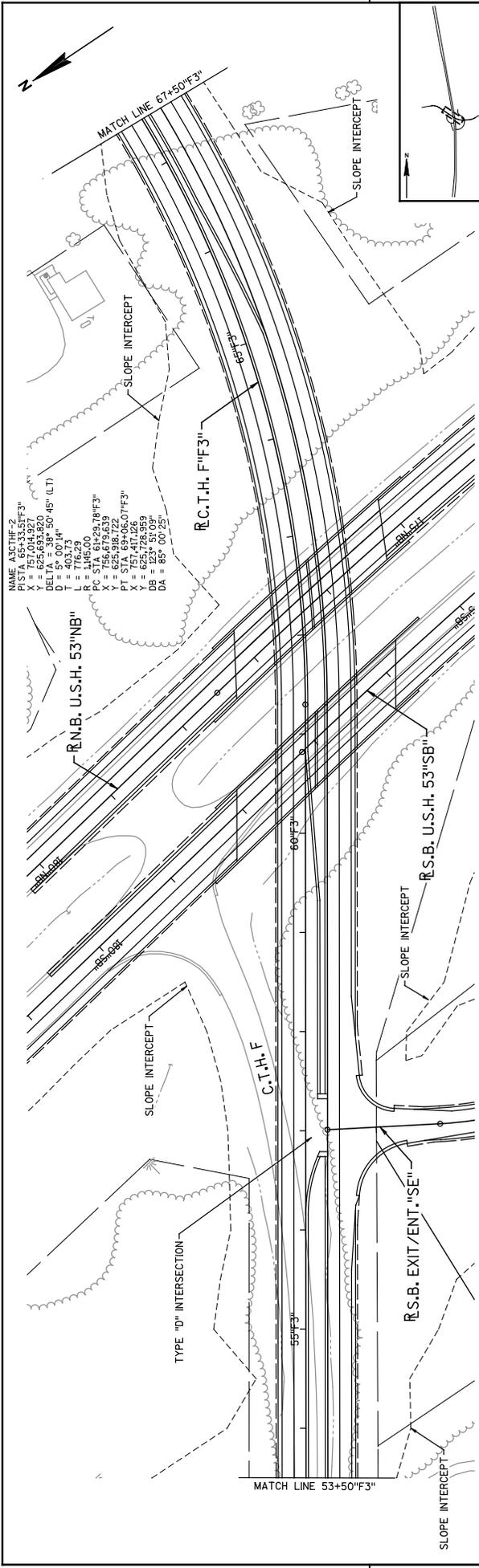


NAME A3C1HF-1
 X1 = 755,443.232
 Y1 = 626,749.422
 DELTA = 43° 26' 16" (RT)
 T = 278.83
 L = 530.89
 R = 700.00
 X2 = 755,466.275
 Y2 = 626,702.993
 X3 = 715,572.1738
 Y3 = 626,594.097
 DB = 80° 24' 54"
 DA = 123° 51' 09"

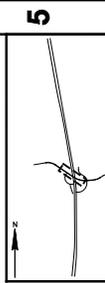


Station	Existing R. ELEVATIONS	Finished R. ELEVATIONS	Grade
50+00	1130.02	1130.02	
52+00	1129.8	1130.0	+0.90%
54+00	1130.1	1130.92	
56+00	1130.47	1131.37	
58+00	1131.82	1129.6	
60+00	1129.7	1132.27	
62+00	1132.72	1130.2	
64+00	1131.3	1131.3	

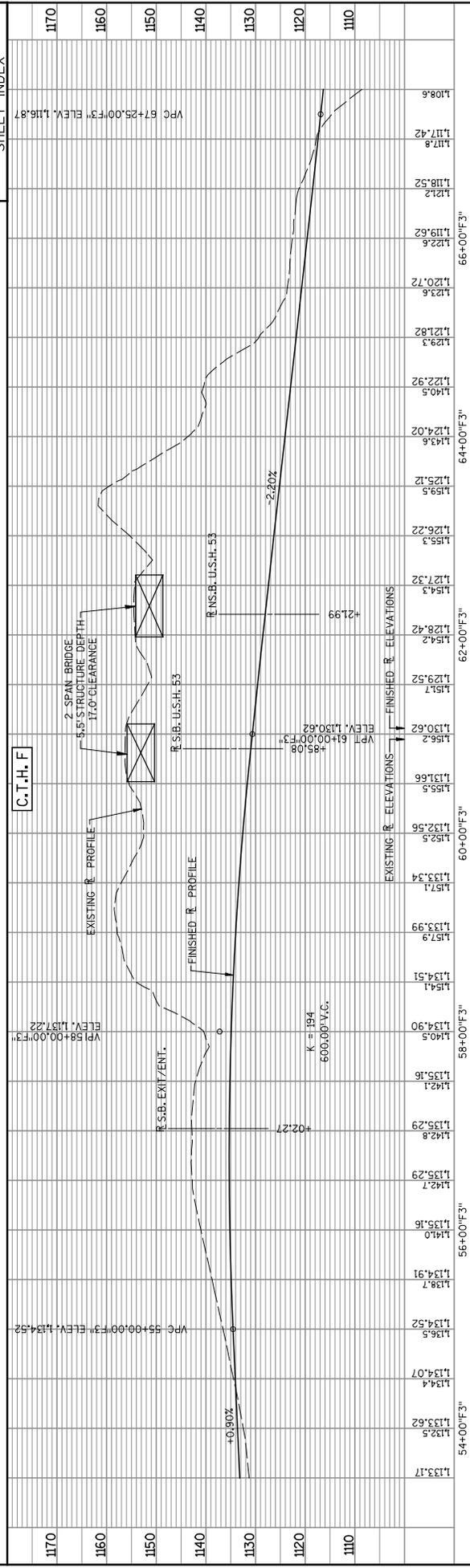
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E
 PLOT BY: SRF Consulting Group
 PLOT DATE: 5/28/2009
 PLOT SCALE: 1:100,000 sf / in.



NAME: A33C11E-2
 PISTA: 65+33.51'F3"
 X = 757.014,927
 DELTA: 62°58'58" S 50°45' 45" (LT)
 D = 5° 00'14"
 T = 403.73
 X = 625.726,299
 DA = 85° 00'25"
 PC STA: 61+29.78'F3"
 X = 756.679,639
 PT STA: 65+06.07'F3"
 X = 757.417,286
 DB = 625.726,299
 DA = 85° 00'25"
 R = 1146.00

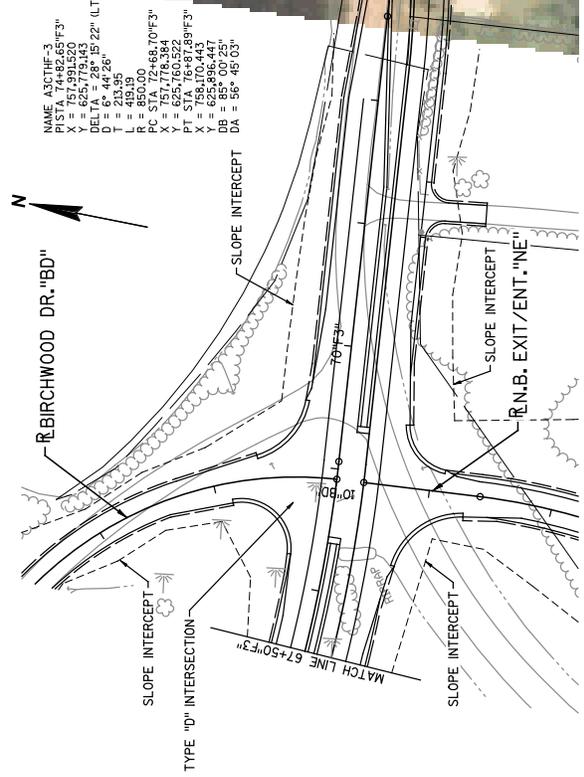


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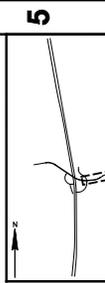
STATION	ELEVATION	SCALE, FEET	PLAN AND PROFILE	COUNTY: WASHBURN	HWY: U.S.H. 53	PROJECT NO: 1190-01-00	SHEET
54+00'F3"	1133.17	0					E
54+00'F3"	1133.62	50					
54+00'F3"	1133.17	100					
56+00'F3"	1133.17	0					
56+00'F3"	1133.16	50					
56+00'F3"	1133.16	100					
58+00'F3"	1134.90	0					
58+00'F3"	1134.90	50					
58+00'F3"	1134.90	100					
60+00'F3"	1133.34	0					
60+00'F3"	1132.56	50					
60+00'F3"	1132.56	100					
62+00'F3"	1127.32	0					
62+00'F3"	1127.32	50					
62+00'F3"	1127.32	100					
64+00'F3"	1124.02	0					
64+00'F3"	1124.02	50					
64+00'F3"	1124.02	100					
66+00'F3"	1118.52	0					
66+00'F3"	1118.52	50					
66+00'F3"	1118.52	100					
68+00'F3"	1117.42	0					
68+00'F3"	1117.42	50					
68+00'F3"	1117.42	100					
70+00'F3"	1108.6	0					
70+00'F3"	1108.6	50					
70+00'F3"	1108.6	100					

FILE NAME : h:\pro\jmdm\6180\N1-m\plan\060103_pp_03.dgn
 PLOT DATE : 5/28/2009
 PLOT BY : SRF Consulting Group



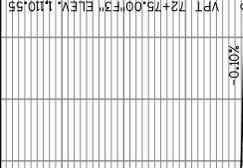
NAME A3CTHF-4
 PISTA 79+70.64'F3"
 X = 658.406.505
 Y = 658.406.505
 DELTA = 33° 14' 17" (RT)
 D = 11° 56' 12"
 T = 143.27
 L = 43.35
 R = 480.00
 PC STA 78+27.37'F3"
 X = 628.571.923
 Y = 628.571.923
 PT STA 81+05.89'F3"
 X = 658.550.174
 Y = 658.550.174
 DB = 56° 45' 03"
 DA = 89° 59' 20"

NAME A3CTHF-3
 PISTA 74+82.65'F3"
 X = 757.991.520
 Y = 757.991.520
 DELTA = 28° 15' 22" (LT)
 D = 6° 44' 26"
 T = 103.35
 L = 43.35
 R = 850.00
 PC STA 72+68.70'F3"
 X = 758.100.443
 Y = 758.100.443
 PT STA 76+87.89'F3"
 X = 625.760.522
 Y = 625.760.522
 DB = 65° 00' 25"
 DA = 56° 48' 03"



5

STATION	EXISTING R. ELEVATIONS	FINISHED R. ELEVATIONS
1140		
1130		
1120		
1110		
1100		
1090		
1080		
	1108.2	1108.2
	1108.61	1108.61
	1108.8	1108.8
	1112.89	1112.89
	1112.7	1112.7
	1113.1	1113.1
	1113.74	1113.74
	1113.8	1113.8
	1113.9	1113.9
	1113.97	1113.97
	1110.7	1110.7
	1110.73	1110.73
	1110.58	1110.58

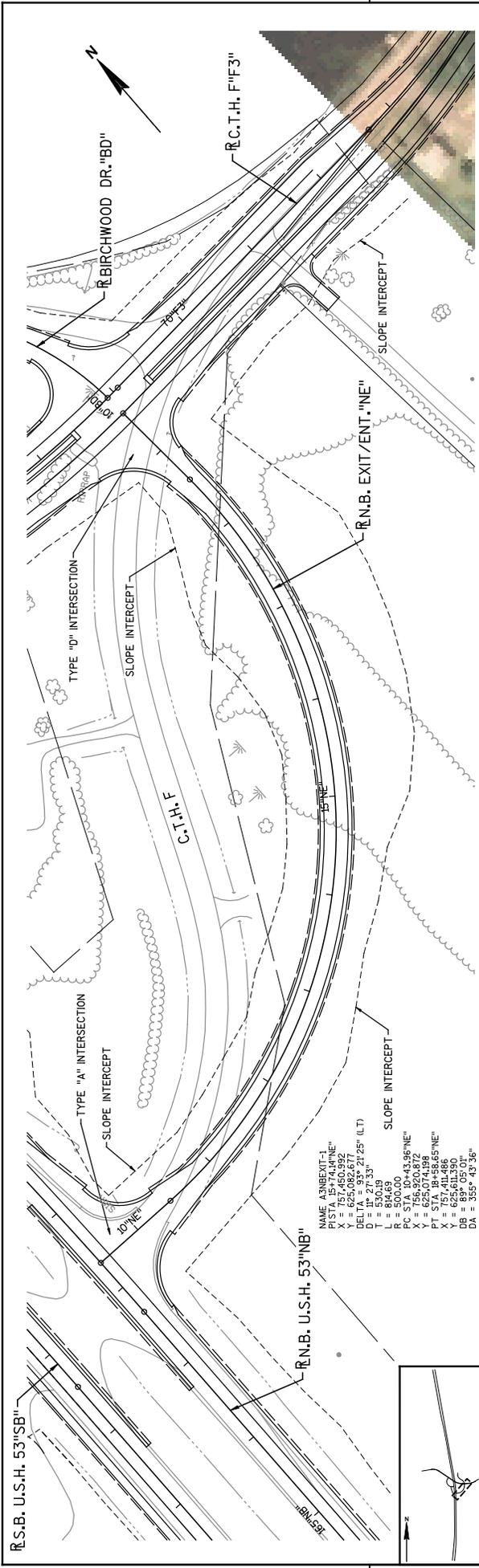


K = 262
 550.00'V.C.

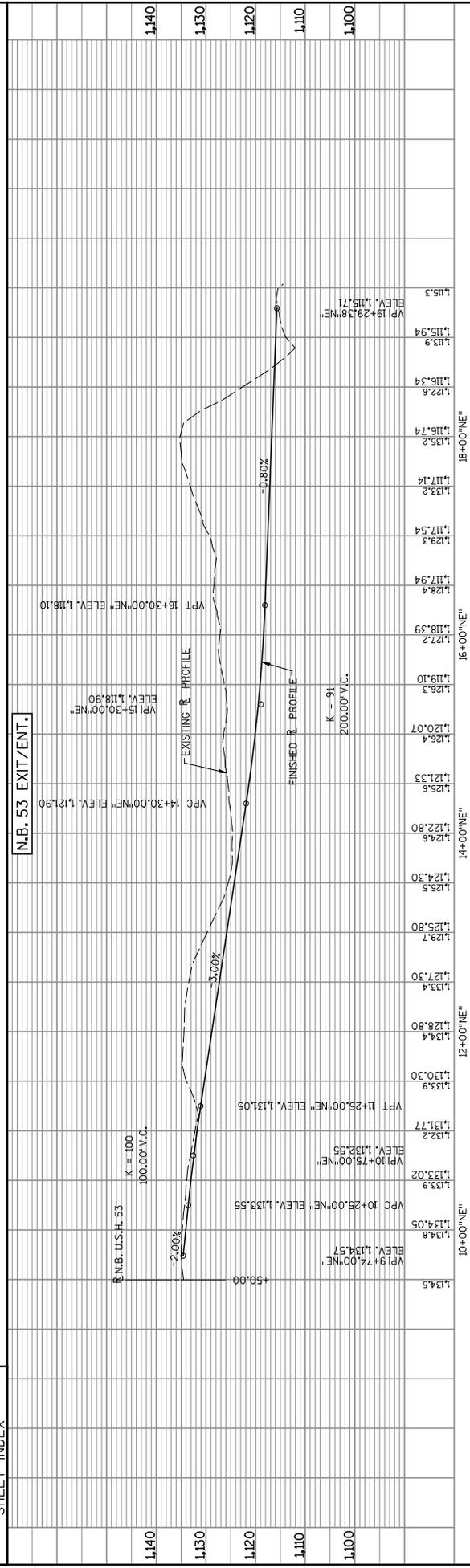
72+00'F3"

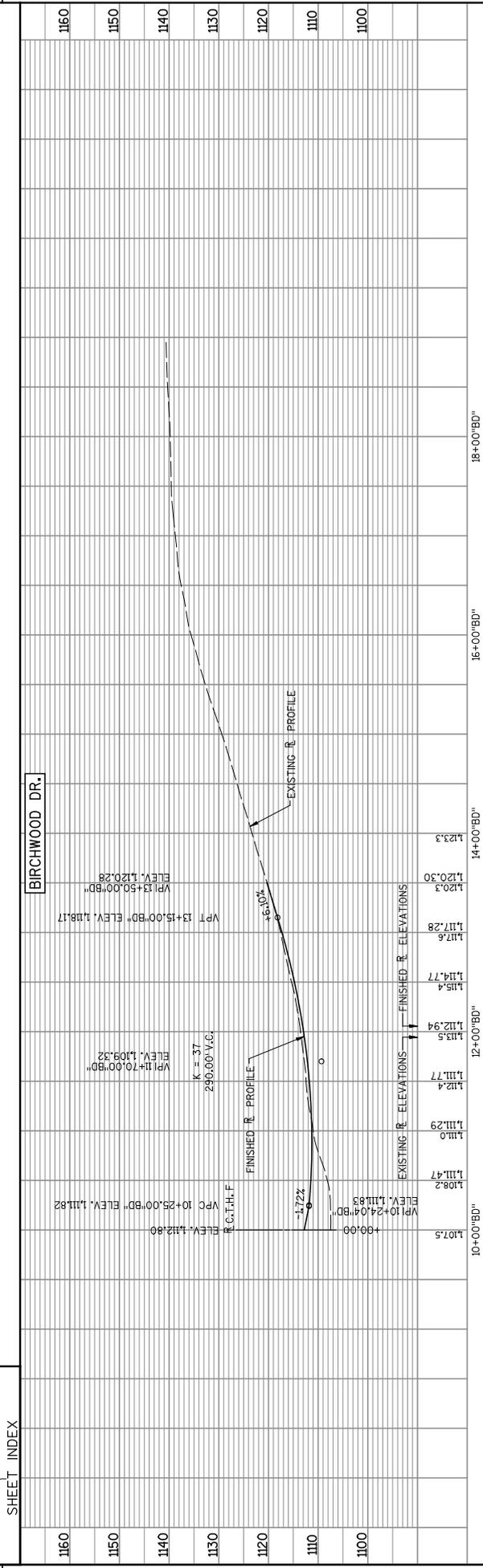
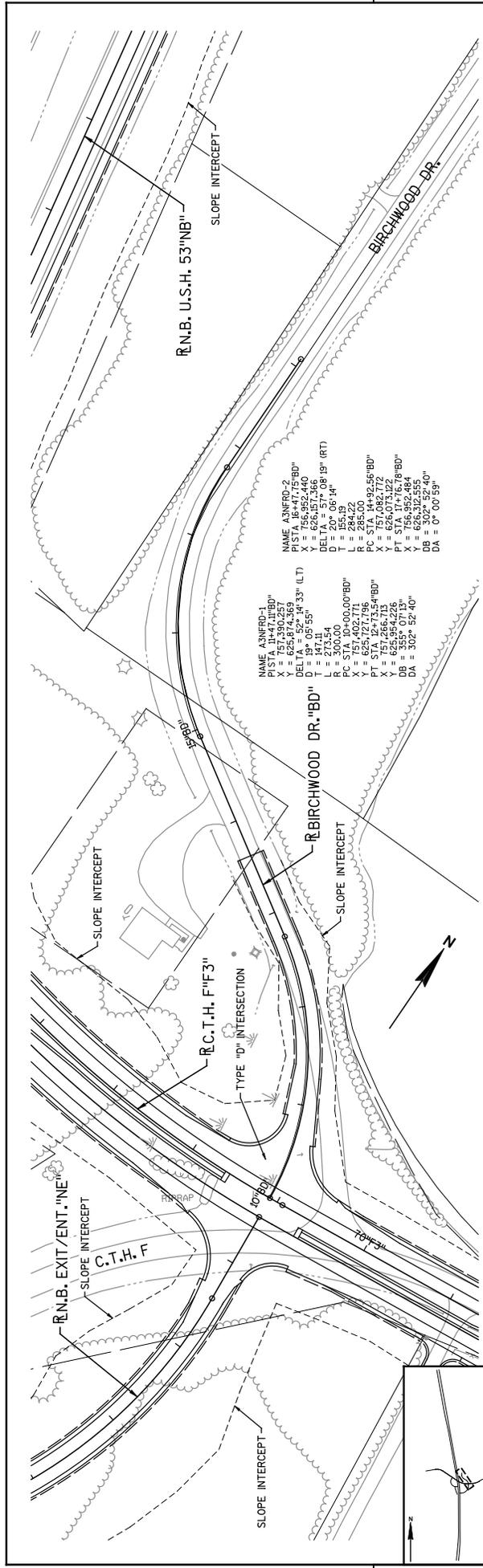
68+00'F3"

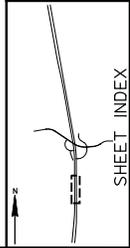
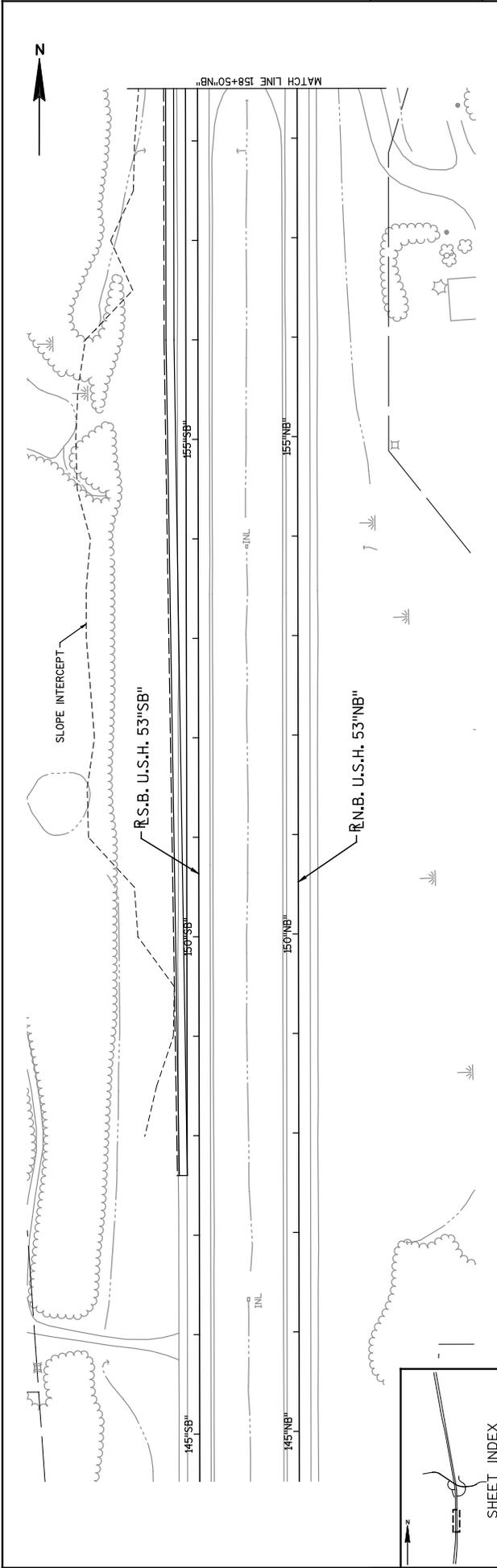
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E
 PLOT BY: SRP Consulting Group
 PLOT DATE: 5/28/2009
 FILE NAME: h:\proj\msh\6190\plan-mc\plan\060104_pp_03.dgn



NAME: ARBEXIT1
 STA: 10+43.95 NE
 X = 751,450.992
 Y = 625,062.877
 DELTA: 27.33°
 L = 550.19
 L = 844.69
 PC STA: 10+43.95 NE
 X = 756,920.872
 Y = 625,074.188
 PT = 625,074.188 NE
 X = 751,411.486
 Y = 625,611.380
 DT = 85.05°
 DA = 355°43'36"

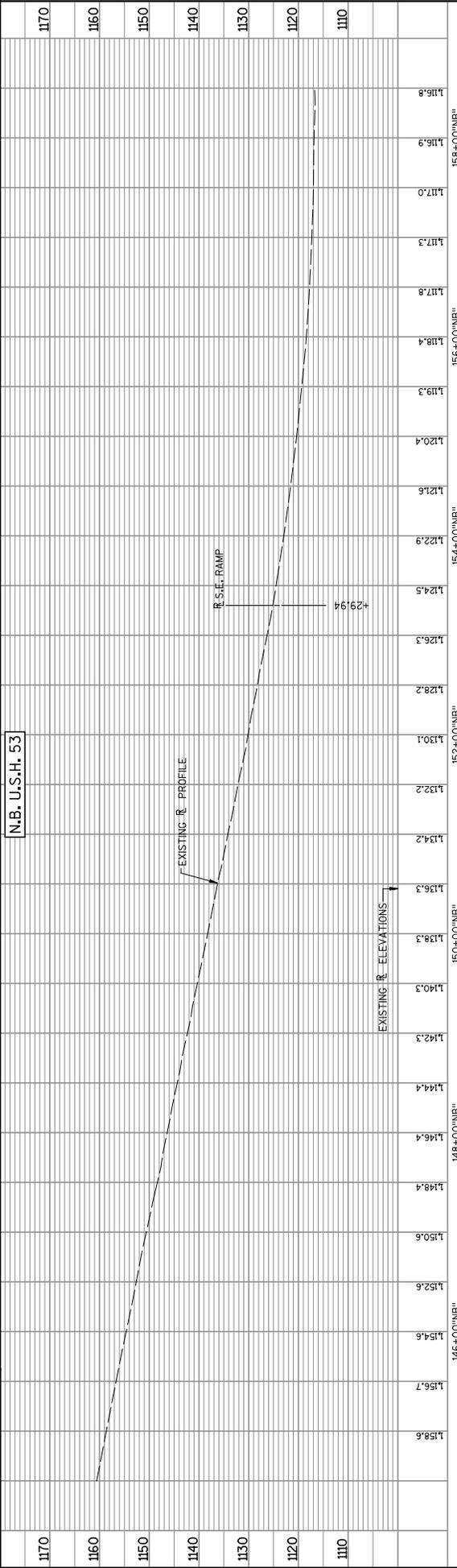






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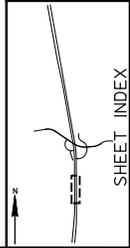
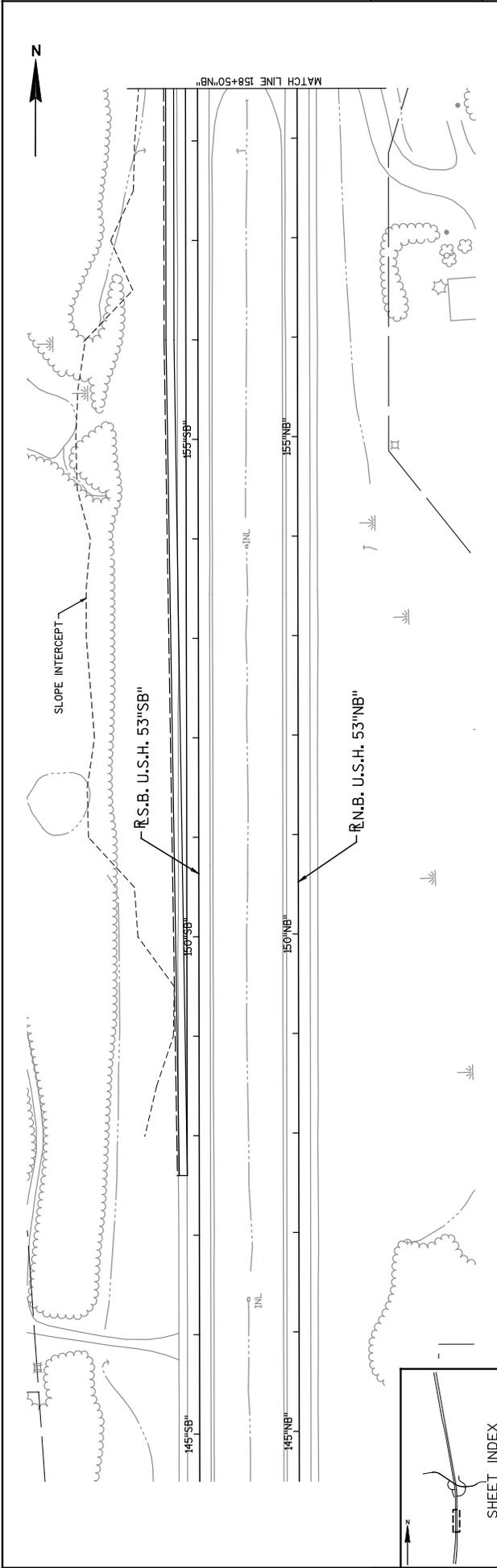
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STATION	ELEVATION	STATION	ELEVATION
1170		156+00	1116.8
1160		156+10	1116.9
1150		156+20	1117.0
1140		156+30	1117.3
1130		156+40	1117.8
1120		156+50	1118.4
1110		157+00	1119.3
		157+10	1120.4
		157+20	1121.6
		157+30	1122.9
		157+40	1124.5
		157+50	1126.3
		158+00	1128.2
		158+10	1130.1
		158+20	1132.2
		158+30	1134.2
		158+40	1136.3
		158+50	1138.3
		159+00	1140.3
		159+10	1142.3
		159+20	1144.4
		159+30	1146.4
		159+40	1148.4
		159+50	1150.6
		160+00	1152.6
		160+10	1154.6
		160+20	1156.7
		160+30	1158.6

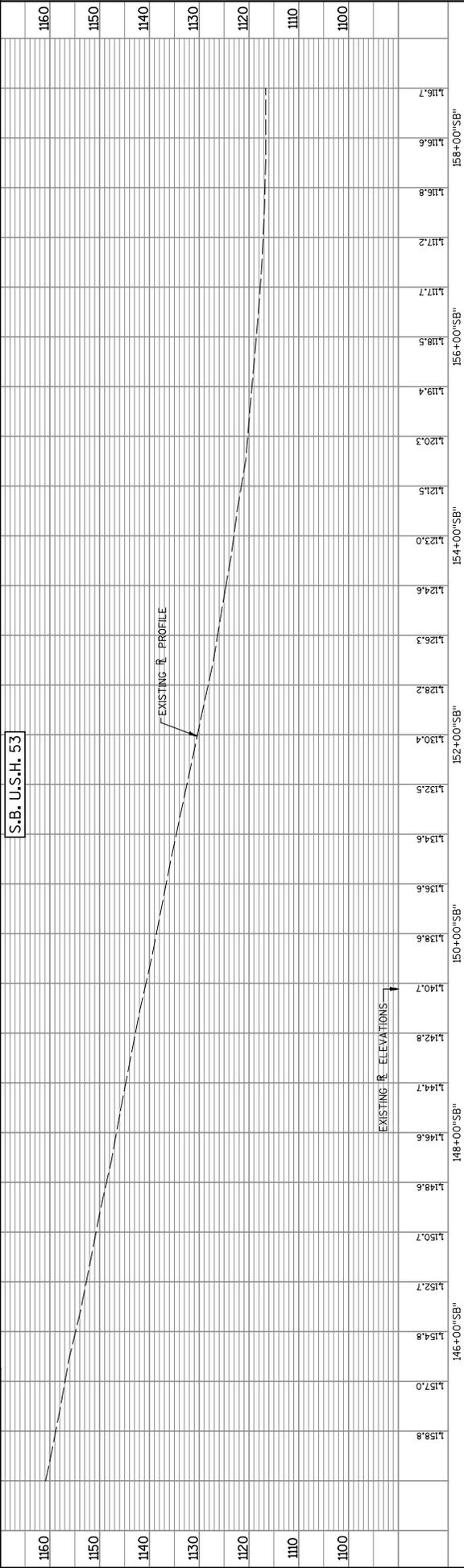
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E
 PLOT BY: SRP Consulting Group
 PLOT DATE: 5/28/2009
 PLOT SCALE: 100.0000 SF / IN.

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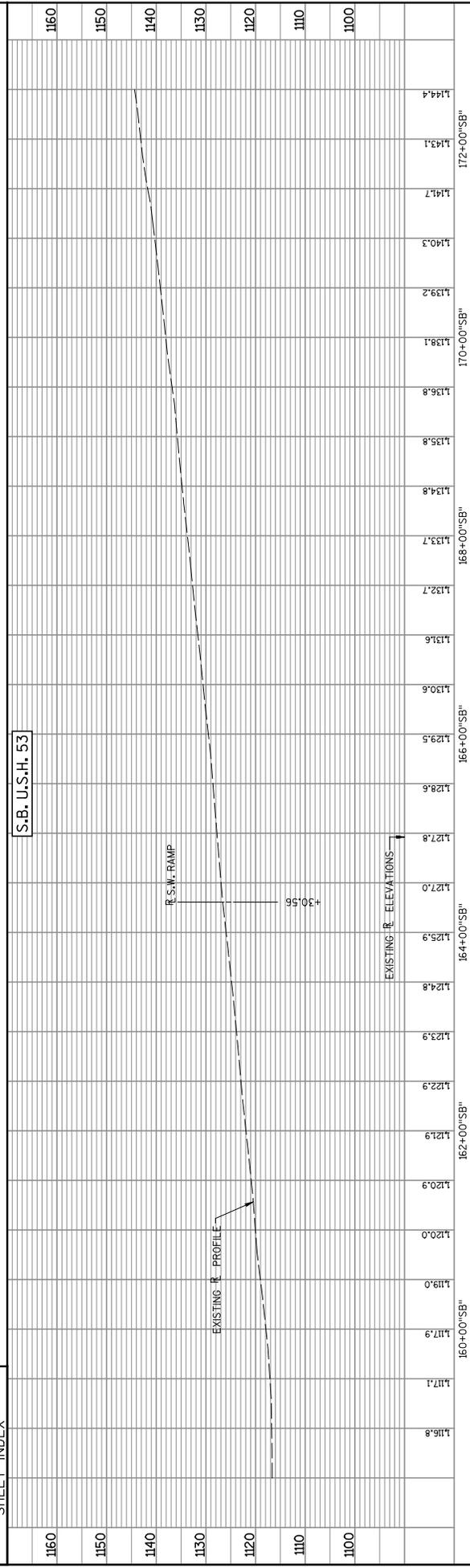
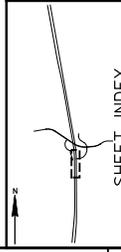
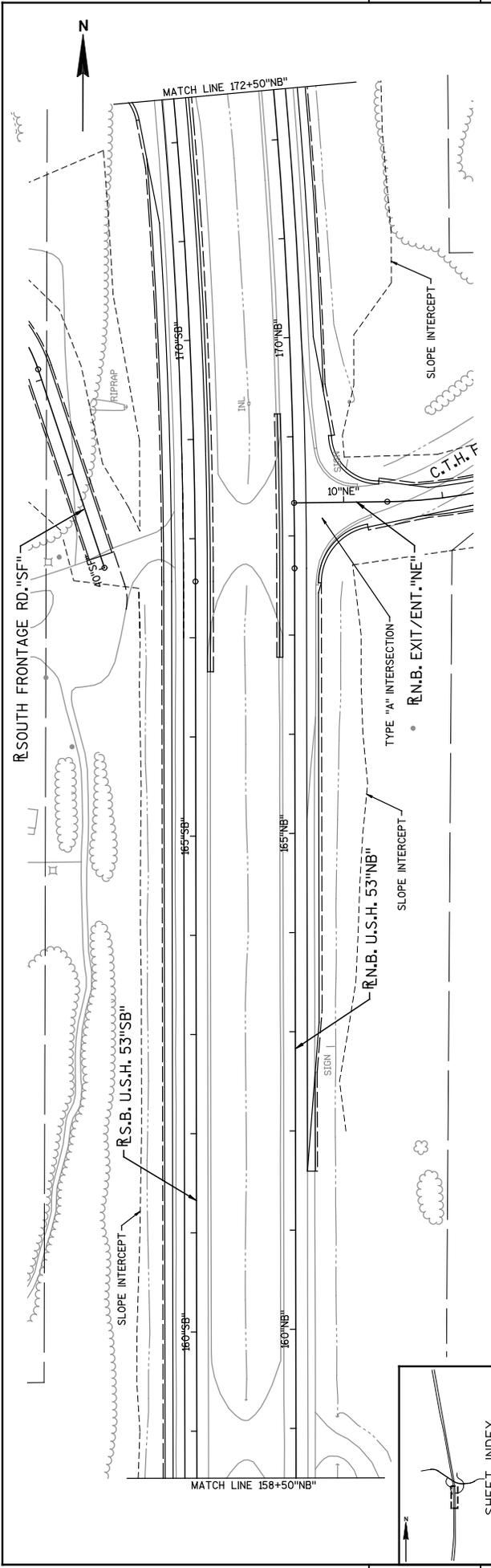


5

5

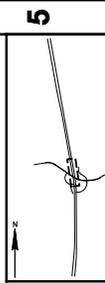
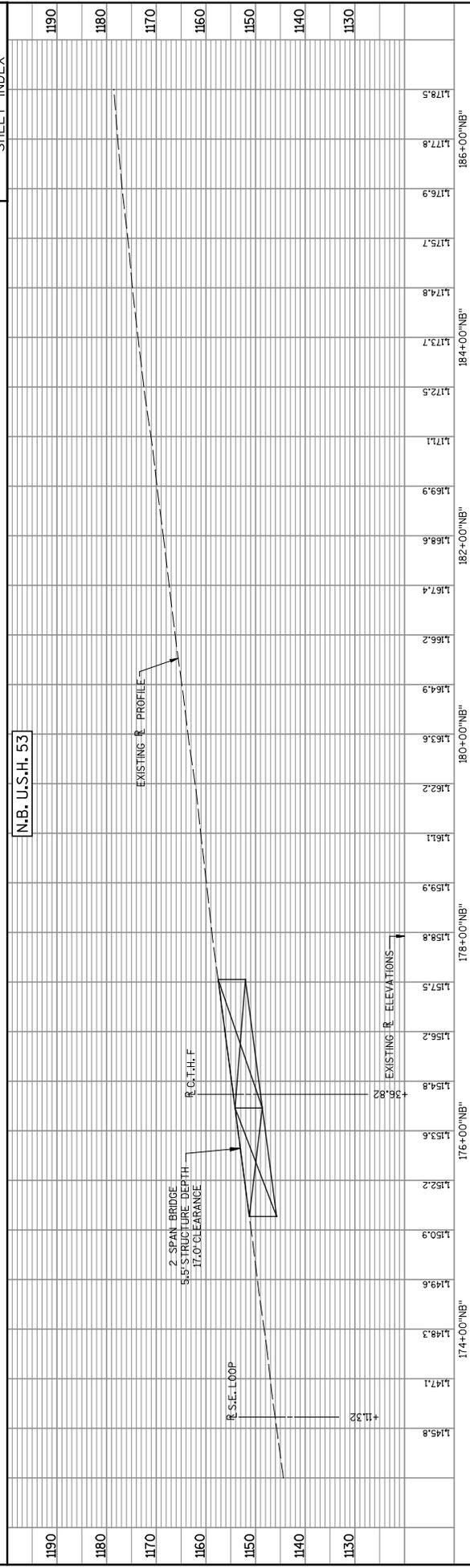
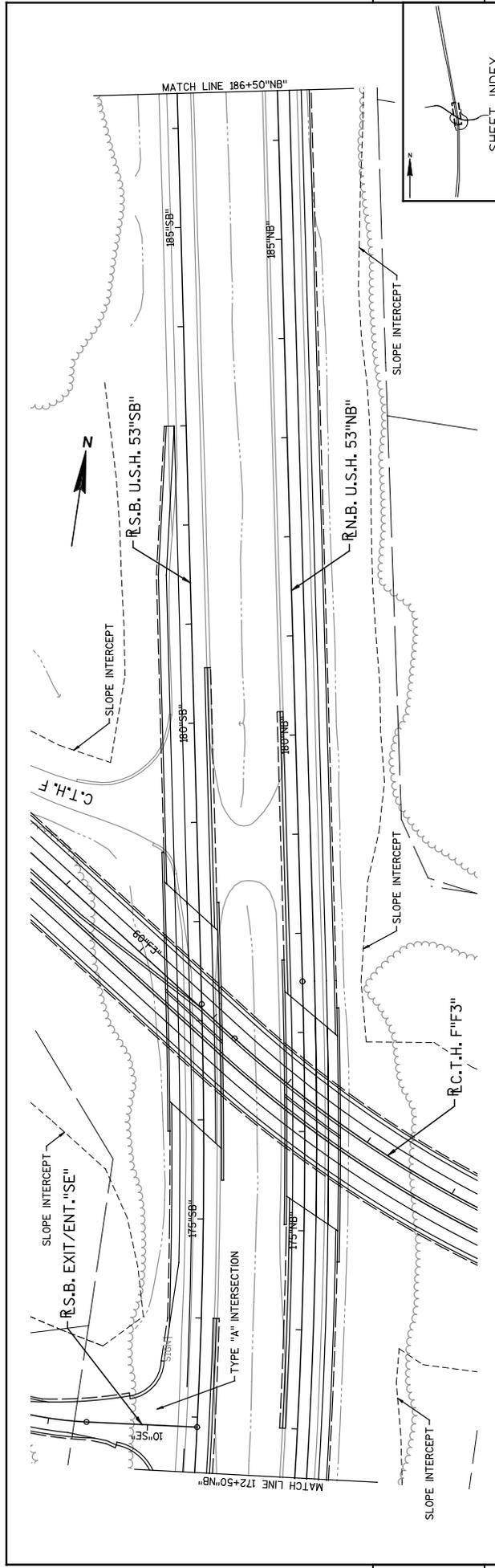


PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100 SHEET E

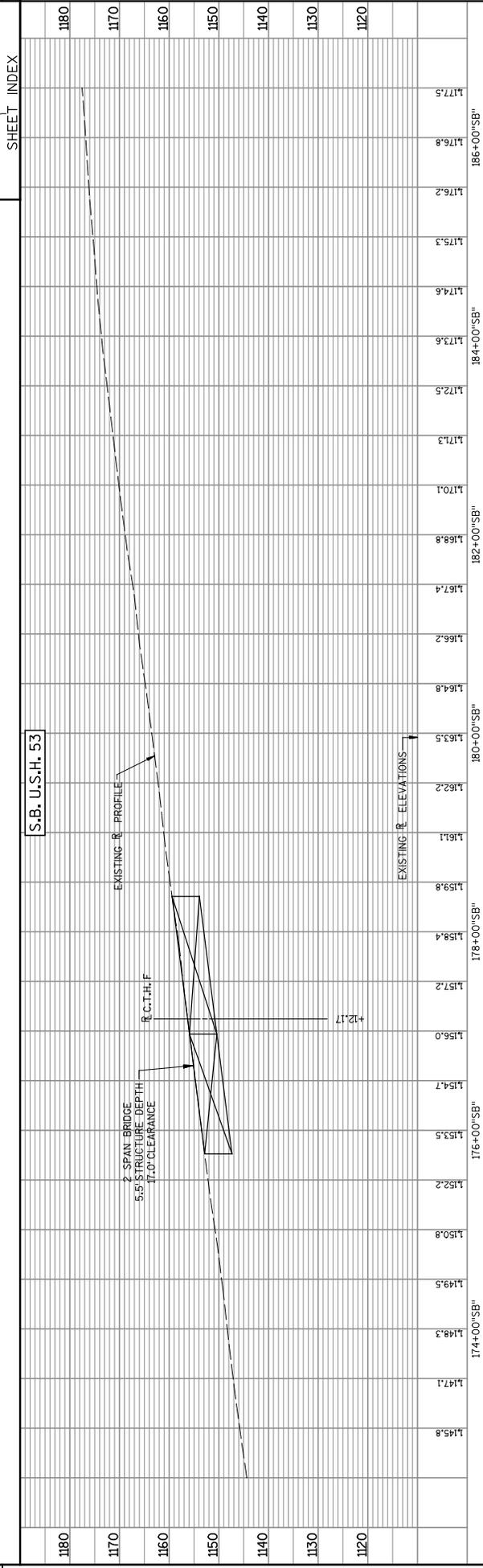
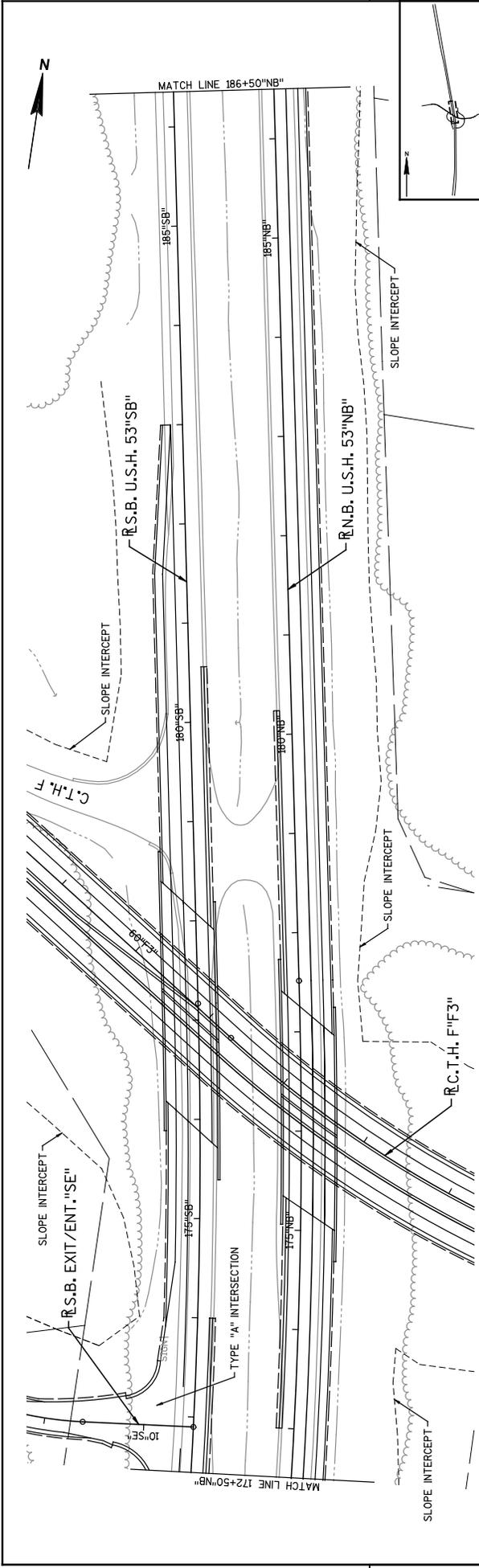


STATION	ELEVATION
160+00	1117.1
161+00	1117.9
162+00	1120.0
163+00	1122.9
164+00	1124.8
165+00	1127.0
166+00	1128.6
167+00	1129.5
168+00	1133.7
169+00	1134.8
170+00	1138.1
171+00	1140.3
172+00	1143.1
172+00	1144.4

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E
 PLOT BY: SRP Consulting Group
 PLOT DATE: 5/28/2009
 PLOT SCALE: 100.0000 SF / IN.
 FILE NAME: h:\proj\msh\6190\11-ml\plan\060115_pp_03.dgn



STATION	ELEVATION
1190	1178.5
1180	1177.8
1170	1176.9
1160	1175.7
1150	1174.8
1140	1173.7
1130	1172.5
1120	1171.1
1110	1169.9
1100	1168.6
1090	1167.4
1080	1166.2
1070	1164.9
1060	1163.6
1050	1162.2
1040	1161.1
1030	1159.9
1020	1158.8
1010	1157.5
1000	1156.2
990	1154.8
980	1153.6
970	1152.2
960	1150.9
950	1149.6
940	1148.3
930	1147.1
920	1145.8
910	1144.3
900	1143.1
890	1141.8
880	1140.5
870	1139.2
860	1137.9
850	1136.6
840	1135.3
830	1134.0
820	1132.7
810	1131.4
800	1130.1
790	1128.8
780	1127.5
770	1126.2
760	1124.9
750	1123.6
740	1122.3
730	1121.0
720	1119.7
710	1118.4
700	1117.1
690	1115.8
680	1114.5
670	1113.2
660	1111.9
650	1110.6
640	1109.3
630	1108.0
620	1106.7
610	1105.4
600	1104.1
590	1102.8
580	1101.5
570	1100.2
560	1098.9
550	1097.6
540	1096.3
530	1095.0
520	1093.7
510	1092.4
500	1091.1
490	1089.8
480	1088.5
470	1087.2
460	1085.9
450	1084.6
440	1083.3
430	1082.0
420	1080.7
410	1079.4
400	1078.1
390	1076.8
380	1075.5
370	1074.2
360	1072.9
350	1071.6
340	1070.3
330	1069.0
320	1067.7
310	1066.4
300	1065.1
290	1063.8
280	1062.5
270	1061.2
260	1059.9
250	1058.6
240	1057.3
230	1056.0
220	1054.7
210	1053.4
200	1052.1
190	1050.8
180	1049.5
170	1048.2
160	1046.9
150	1045.6
140	1044.3
130	1043.0
120	1041.7
110	1040.4
100	1039.1
90	1037.8
80	1036.5
70	1035.2
60	1033.9
50	1032.6
40	1031.3
30	1030.0
20	1028.7
10	1027.4
0	1026.1
10	1024.8
20	1023.5
30	1022.2
40	1020.9
50	1019.6
60	1018.3
70	1017.0
80	1015.7
90	1014.4
100	1013.1
110	1011.8
120	1010.5
130	1009.2
140	1007.9
150	1006.6
160	1005.3
170	1004.0
180	1002.7
190	1001.4
200	1000.1
210	998.8
220	997.5
230	996.2
240	994.9
250	993.6
260	992.3
270	991.0
280	989.7
290	988.4
300	987.1
310	985.8
320	984.5
330	983.2
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350	980.6
360	979.3
370	978.0
380	976.7
390	975.4
400	974.1
410	972.8
420	971.5
430	970.2
440	968.9
450	967.6
460	966.3
470	965.0
480	963.7
490	962.4
500	961.1
510	959.8
520	958.5
530	957.2
540	955.9
550	954.6
560	953.3
570	952.0
580	950.7
590	949.4
600	948.1
610	946.8
620	945.5
630	944.2
640	942.9
650	941.6
660	940.3
670	939.0
680	937.7
690	936.4
700	935.1
710	933.8
720	932.5
730	931.2
740	929.9
750	928.6
760	927.3
770	926.0
780	924.7
790	923.4
800	922.1
810	920.8
820	919.5
830	918.2
840	916.9
850	915.6
860	914.3
870	913.0
880	911.7
890	910.4
900	909.1
910	907.8
920	906.5
930	905.2
940	903.9
950	902.6
960	901.3
970	900.0
980	898.7
990	897.4
1000	896.1
1010	894.8
1020	893.5
1030	892.2
1040	890.9
1050	889.6
1060	888.3
1070	887.0
1080	885.7
1090	884.4
1100	883.1
1110	881.8
1120	880.5
1130	879.2
1140	877.9
1150	876.6
1160	875.3
1170	874.0
1180	872.7
1190	871.4
1200	870.1
1210	868.8
1220	867.5
1230	866.2
1240	864.9
1250	863.6
1260	862.3
1270	861.0
1280	859.7
1290	858.4
1300	857.1
1310	855.8
1320	854.5
1330	853.2
1340	851.9
1350	850.6
1360	849.3
1370	848.0
1380	846.7
1390	845.4
1400	844.1
1410	842.8
1420	841.5
1430	840.2
1440	838.9
1450	837.6
1460	836.3
1470	835.0
1480	833.7
1490	832.4
1500	831.1
1510	829.8
1520	828.5
1530	827.2
1540	825.9
1550	824.6
1560	823.3
1570	822.0
1580	820.7
1590	819.4
1600	818.1
1610	816.8
1620	815.5
1630	814.2
1640	812.9
1650	811.6
1660	810.3
1670	809.0
1680	807.7
1690	806.4
1700	805.1
1710	803.8
1720	802.5
1730	801.2
1740	799.9
1750	798.6
1760	797.3
1770	796.0
1780	794.7
1790	793.4
1800	792.1
1810	790.8
1820	789.5
1830	788.2
1840	786.9
1850	785.6
1860	784.3
1870	783.0
1880	781.7
1890	780.4
1900	779.1
1910	777.8
1920	776.5
1930	775.2
1940	773.9
1950	772.6
1960	771.3
1970	770.0
1980	768.7
1990	767.4
2000	766.1
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2030	762.2
2040	760.9
2050	759.6
2060	758.3
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2080	755.7
2090	754.4
2100	753.1
2110	751.8
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2190	741.4
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2220	737.5
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2790	663.4
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3610	556.8



PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53

PLAN AND PROFILE

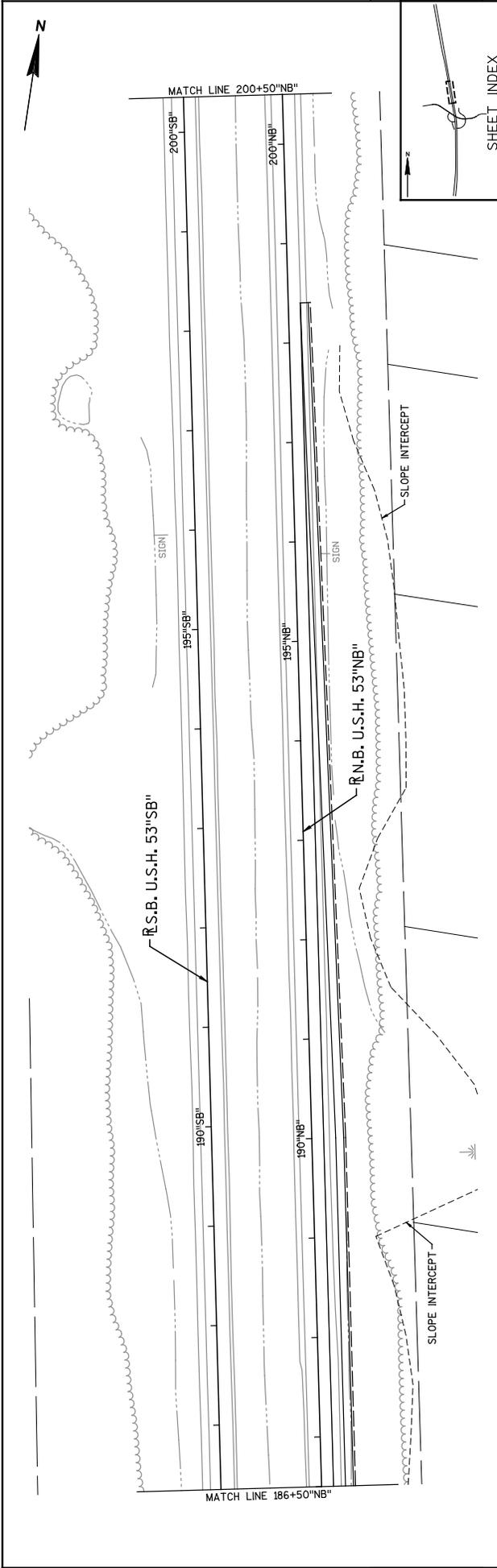
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SHEET 100

PLOT BY: SRF Consulting Group

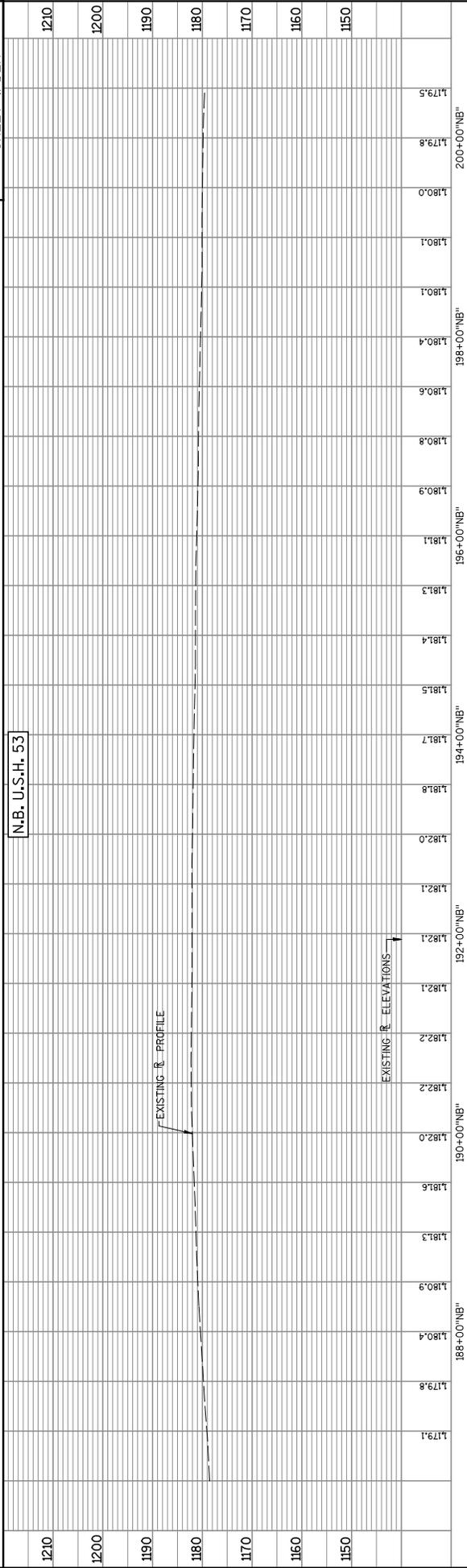
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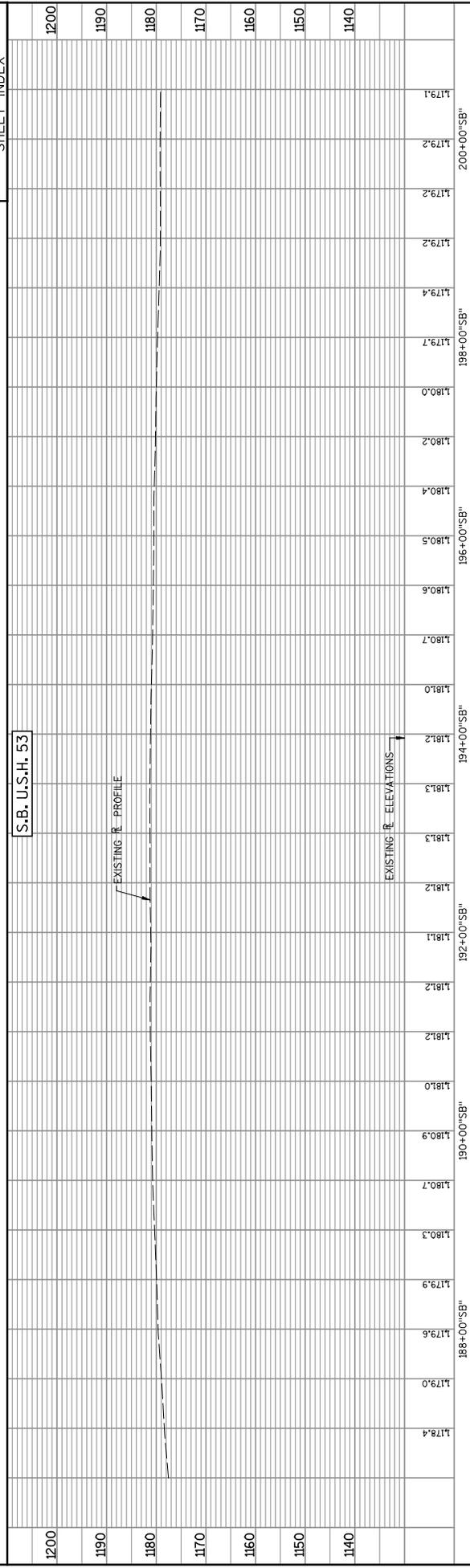
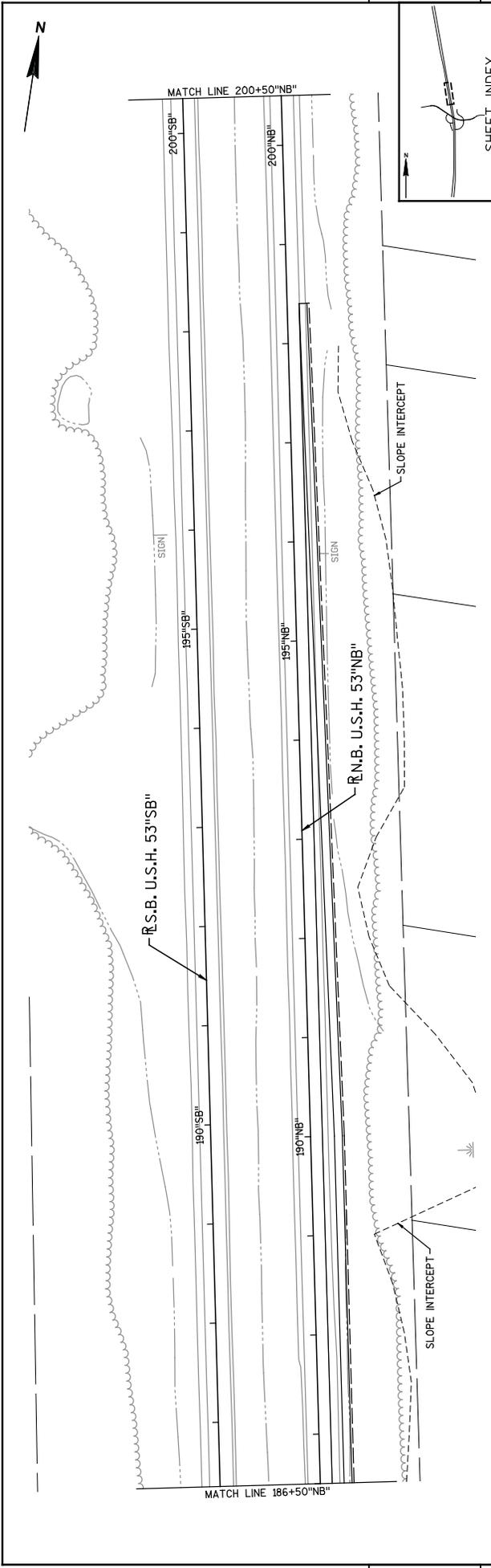
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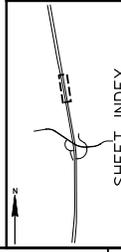
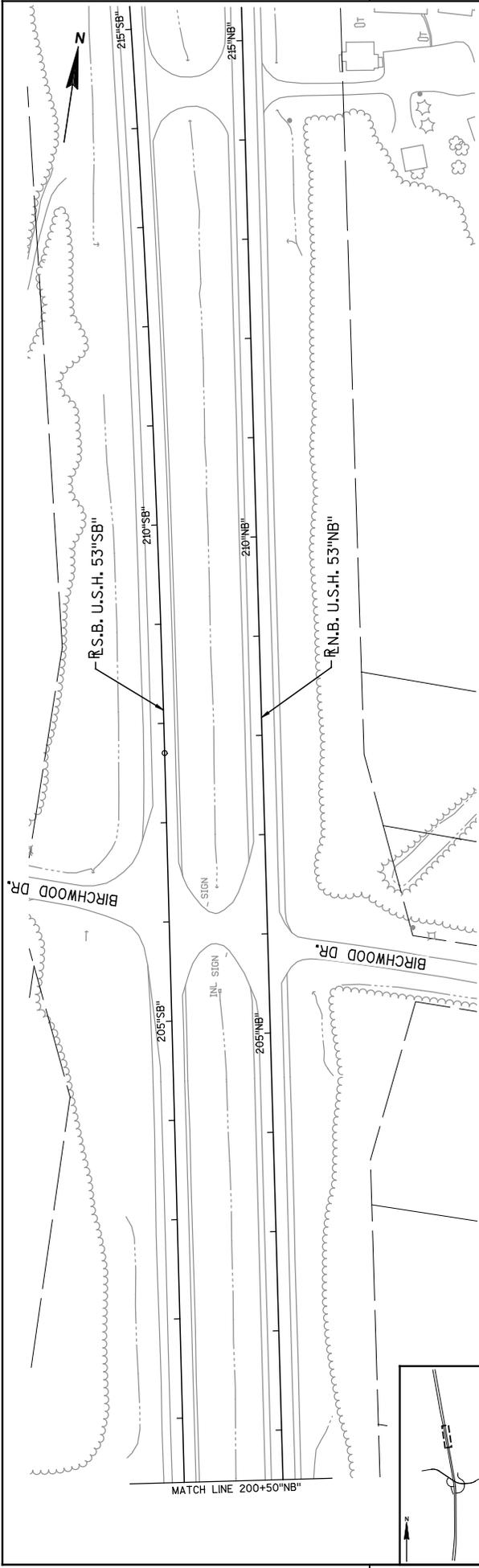
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HWY: U.S.H. 53		0 50 100	E

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 PLOT BY : SRP Consulting Group
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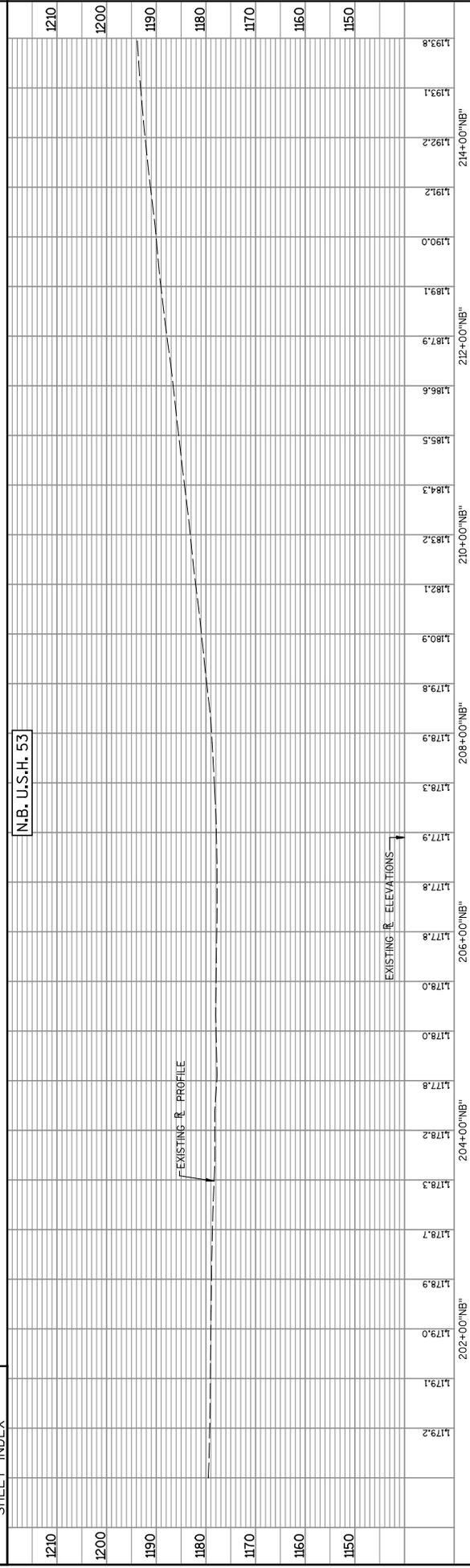
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188+10	1179.0
188+20	1179.6
188+30	1179.9
188+40	1180.3
188+50	1180.7
189+00	1180.9
189+10	1181.0
189+20	1181.2
189+30	1181.2
189+40	1181.1
189+50	1181.2
190+00	1181.3
190+10	1181.3
190+20	1181.3
190+30	1181.2
190+40	1181.3
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191+20	1180.7
191+30	1180.6
191+40	1180.5
191+50	1180.4
192+00	1180.2
192+10	1180.0
192+20	1179.7
192+30	1179.4
192+40	1179.2
192+50	1179.2
193+00	1179.2
193+10	1179.2
193+20	1179.2
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193+40	1179.1

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
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 PLOT DATE: 5/28/2009
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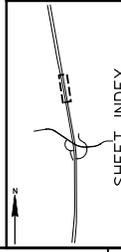
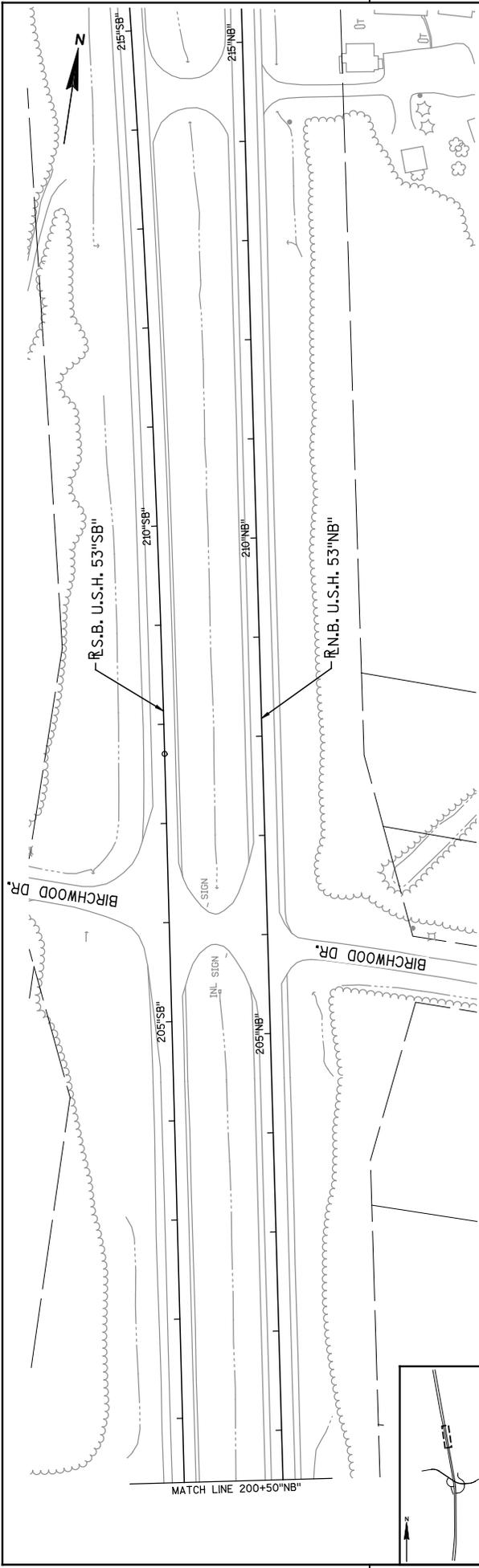
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STATION	ELEVATION (FEET)
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	1192.2
	1191.2
	1190.0
	1189.1
	1187.9
	1186.6
	1185.5
	1184.3
	1183.2
	1182.1
	1180.9
	1179.8
	1178.9
	1178.3
	1177.9
	1177.8
	1177.8
	1178.0
	1178.0
	1177.8
	1178.2
	1178.3
	1178.7
	1178.9
	1179.0
	1179.1
	1179.2

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET 0 50 100
 SHEET E
 PLOT DATE: 5/28/2009
 PLOT BY: SRF Consulting Group
 PLOT SCALE: 100.0000 SF / IN.
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Station	Elevation	Station	Elevation
1200		212+00"SB"	1192.1
1190		212+00"SB"	1191.5
1180		212+00"SB"	1190.7
1170		212+00"SB"	1189.8
1160		212+00"SB"	1188.9
1150		212+00"SB"	1188.0
1140		212+00"SB"	1187.0
		212+00"SB"	1185.7
		212+00"SB"	1184.7
		212+00"SB"	1183.7
		212+00"SB"	1182.7
		212+00"SB"	1181.5
		212+00"SB"	1180.7
		212+00"SB"	1179.7
		212+00"SB"	1179.2
		212+00"SB"	1178.8
		212+00"SB"	1178.3
		212+00"SB"	1178.1
		212+00"SB"	1177.9
		212+00"SB"	1177.9
		212+00"SB"	1178.0
		212+00"SB"	1177.8
		212+00"SB"	1178.0
		212+00"SB"	1178.1
		212+00"SB"	1178.1
		212+00"SB"	1178.2
		212+00"SB"	1178.3
		212+00"SB"	1178.6
		212+00"SB"	1178.9

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
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 PLOT BY: SRF Consulting Group
 PLOT DATE: 5/28/2009
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STH 77

Description and Discussion

STH 77 intersects USH 53 near the western village limits of Minong. This intersection has been included in other studies of the USH 53 corridor due to the higher number and severity of crashes occurring at this intersection.

When USH 53 was constructed as an expressway the alignment was moved to the western edge of the village with the old alignment becoming Business USH 53. New businesses have developed on the west side of the at-grade intersection since USH 53 was realigned to its current location.

To start the development of alternatives we began with the standard diamond configuration at the existing at-grade intersection. From there alternate locations that a standard diamond could be located along the USH 53 corridor that would still provide access to the community and businesses as well as reduce the impacts that would occur using the on-alignment location. Locating the interchange to the south would have the least impact to the environment and community due to the alignment of STH 77 to the west and east. Moving the interchange to a new location would result in an extensive amount of new alignment of STH 77 and therefore alternatives that used the existing roadways were preferred. Using the north and south ramp connections of Business USH 53 to create a split diamond interchange was considered. Each of these alternative locations lead to other impacts, therefore other alternatives with varying ramp configurations were developed at the existing at-grade intersection.

Six alternate were carried forward and presented to the local officials and public for comment. All six alternatives would meet the purpose of increasing the safety of traffic entering, exiting and crossing USH 53 as well as maintaining mobility for the corridor as traffic volumes increase.

Alternate 1:

Alternative 1 consists of placing a standard diamond interchange at the same location as the current at-grade intersection. Along STH 77 to the east on the interchange approximately 8 parcels that are currently developed as private residents would need to have their access modified to provide the optimal spacing of ¼ mile from the ramp terminals.

South of the interchange along the east side one field entrance and one woods entrance would be closed along with the southern connection to Business USH 53. No additional town roads would need to be constructed to accommodate these closures. South of the interchange on the west side on USH 53 one field entrance would be removed resulting in the building of a town road providing access to the parcels in the SW of the interchange. A commercial access located 1 ¼ miles to the south on the west side of USH 53 would remain open.

North of the interchange on the west side of USH 53 Shell Creek and Wallace Roads would be closed. Redirection for residents along Shell creek road would not exceed 3 miles in length. Wallace road on the west side is a dead end roadway and therefore a connection to the south to access STH 77 would be constructed. Business access onto STH 77 would be closed and redirected to the service road that would connect Wallace Road. This would create an additional ½ mile of travel to the business from the interchange. North of the interchange on the east side of USH 53 Shell Creek (Business USH 53) and Wallace Roads would also be closed. No additional roadways would need to be constructed on the east side for connectivity. Alternative 1 would require the relocation of 2 or 3 businesses.

Alternative 2:

Alternative 2 consists of placing a standard diamond interchange south of the existing intersection with STH 77 somewhere near the south connection of Business USH 53. This alternative was brought to the local officials and the public without defining the exact alignment of the relocated STH 77. If public comment received had been in favor of this alternative more extensive analysis would have been needed. The closure of the same public and private access along USH 53 would be required as in Alternative 1 with the addition of the commercial access located just south of the interchange on the west side of USH 53. The accesses along existing STH 77 would not need to be modified due to the realignment of STH 77 and now would be located on a dead end roadway. This alternative would not require the relocation of any business.

Alternative 3:

Alternative 3 uses the Business USH 53 corridor as the main access to the community by placing half diamond interchanges at the north and south connection of Business 53 to USH 53. This alternative would not relocate STH 77 resulting in the need for an overpass for STH 77 to cross USH 53. Access modification required along USH 53 would be the closure of Wallace Road and well as some private access points. A town road connection to Wallace Road on the west side of USH 53 would need to be constructed as well as intersection improvements to the intersection of STH 77 and Business 53. This configuration would result in the redirection of traffic to the business on the west side of USH 53 of about 1 ½ to 1 ¾ miles. This alternative may not require the relocation of any business.

Alternative 4:

Alternative 4 is a compressed diamond interchange located at the existing at-grade intersection of USH 53 and STH 77. This alternative has the same roadway and private access closures and modifications as Alternative 1. By compressing the ramps together there is reduced physical impact to the parcels along USH 53. The closure of access along STH 77 would still create the redirection of the business traffic on the west side of USH 53 of about ½ mile. With the compressed diamond configuration the ramp terminals are closer together requiring a larger bridge to be placed over USH 53 to provide additional queuing space for turning traffic. This alternative may require that relocation of 1 to 3 businesses in the NW and SW quadrants.

Alternative 5:

Alternative 5 consist of a partial parclo interchange at the existing USH 53/STH 77 intersection. The ramps on the east side of USH 53 would be the standard diamond configuration with the exception that they would be pulled in as tight to the mainline as possible. This would reduce the impact to the private accesses along STH 77 on the east side of USH 53. The ramps on the west side of USH 53 would be folded to the south. This would allow for the creation of a service road directly to the north from the ramp terminals providing direct access to the business in the NW quadrant. Shell Creek and Wallace Road access to USH 53 would be closed along with the private access in the same manner as in alternative 1 thru 4. This alternative would require the relocation of one business in the SW quadrant.

Alternative 6:

Alternative 6 places a single point interchange at the existing intersection of USH 53 and STH 77. With the design of a single point interchange traffic signals would be needed to control the intersection. Since the ramp intersections are combined on the bridge, there is a higher probability of the structure being closed for maintenance work, or due to accidents. For this reason an overpass at Shell Creek Road was included to provide this alternate connectivity from east to west. All access modifications along USH 53 to the north and south would be the same as Alternative 1-

5 with the exception that Shell Creek Road would be an overpass. The access along STH 77 of the west side to the business would be removed and provided off of the service roads. This would result in an additional travel distance to the business of approximately ¼ mile. This alternative would require the relocation of 1 to 3 businesses.

Agency and public comment:

The only comment from the DNR specific to the alternatives was in regards to the overpass at Shell Creek Road and USH 53. Shell Creek is a Class II brook trout stream, listed as an outstanding water resource and has a floodplain associated with it. They noted that if Shell Creek roadway needed to be altered to construct an overpass a hydraulic and hydrologic study may be required.

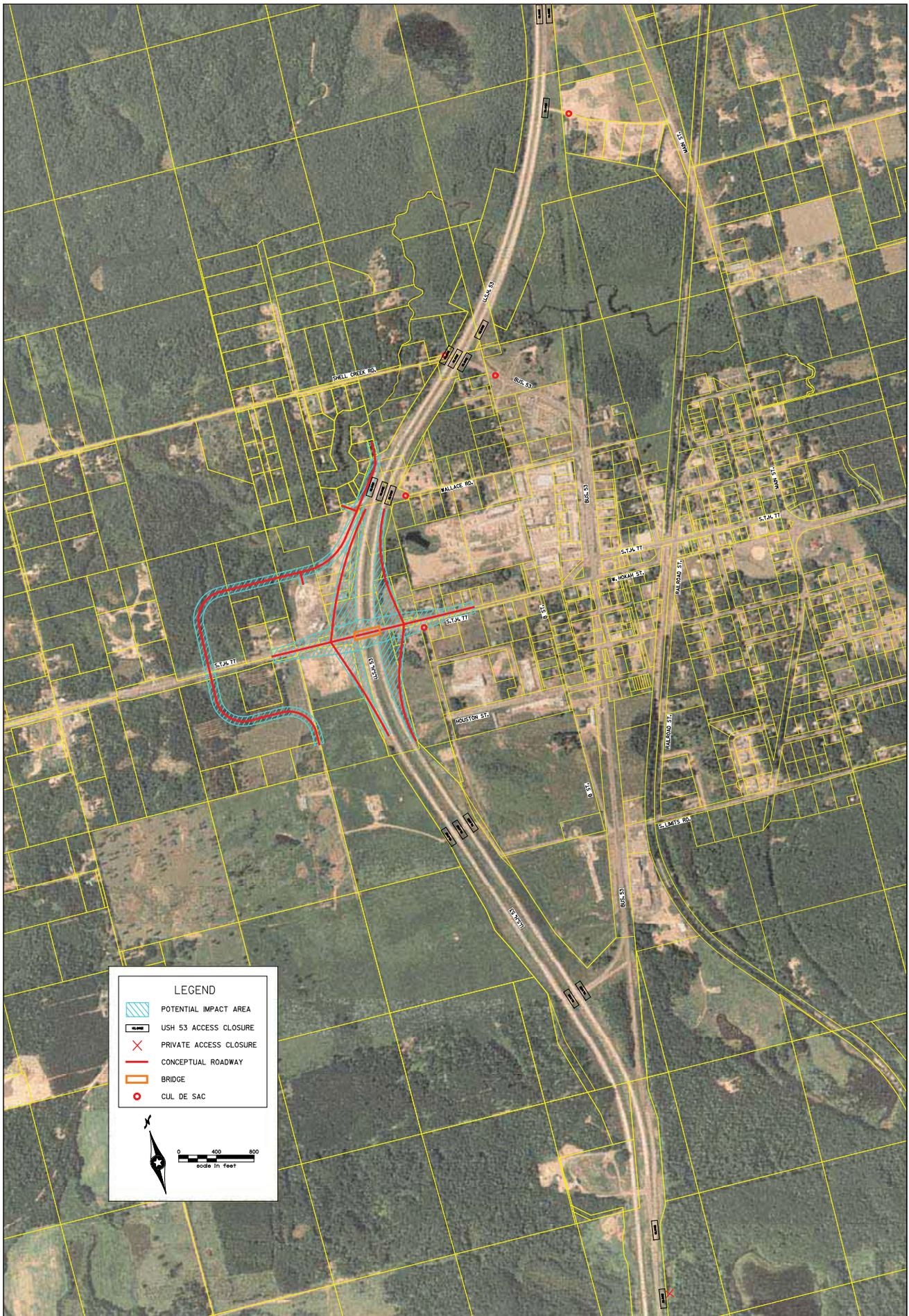
Local Officials comments received were basically in support of alternatives 1, 4 and 5 with five of the comments stating that they would like to see the addition of the overpass at Shell Creek Road to be included with their preferred alternative. They ranked alternative 5 at the top with alts 4 and 6 as second and third choices.

Public comment were on alternative 3, 4 5, and 6 and mentioned the addition of an overpass at Shell Creek Road with alternatives 4 and 5. One of the major concerns was the impact to the existing businesses at the intersection. All alternatives would impact the businesses, but alternative 5 having the least impact. They ranked Alternative 5 as the top pick with alternative 3 and 4 a close second and third.

Conclusion:

After reviewing the comments received as well as the alternative evaluation matrix, Alternative 5 was selected as being the preferred alternative for continued development. The only addition to the alternative is the inclusion of the overpass at Shell Creek Road. This is added due to local official concerns of access for emergency vehicles back and forth across USH 53 as well as construction staging. At the time of the design/construction phase, coordination with the DNR would be required to address the concerns with the Shell Creek area.

A preliminary plan was developed for the interchange and reviewed by PDS. Following the review the design was adjusted to meet the FDM standards.



04/17/08



Alternative 1 - US 53 Corridor Preservation, Minong Area

STH 77 Standard Diamond



04/17/08



Corridor Preservation
Minong Area

Alternative 2 - US 53 Corridor Preservation, Minong Area

STH 77 Standard Diamond with Realigned STH 77

LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

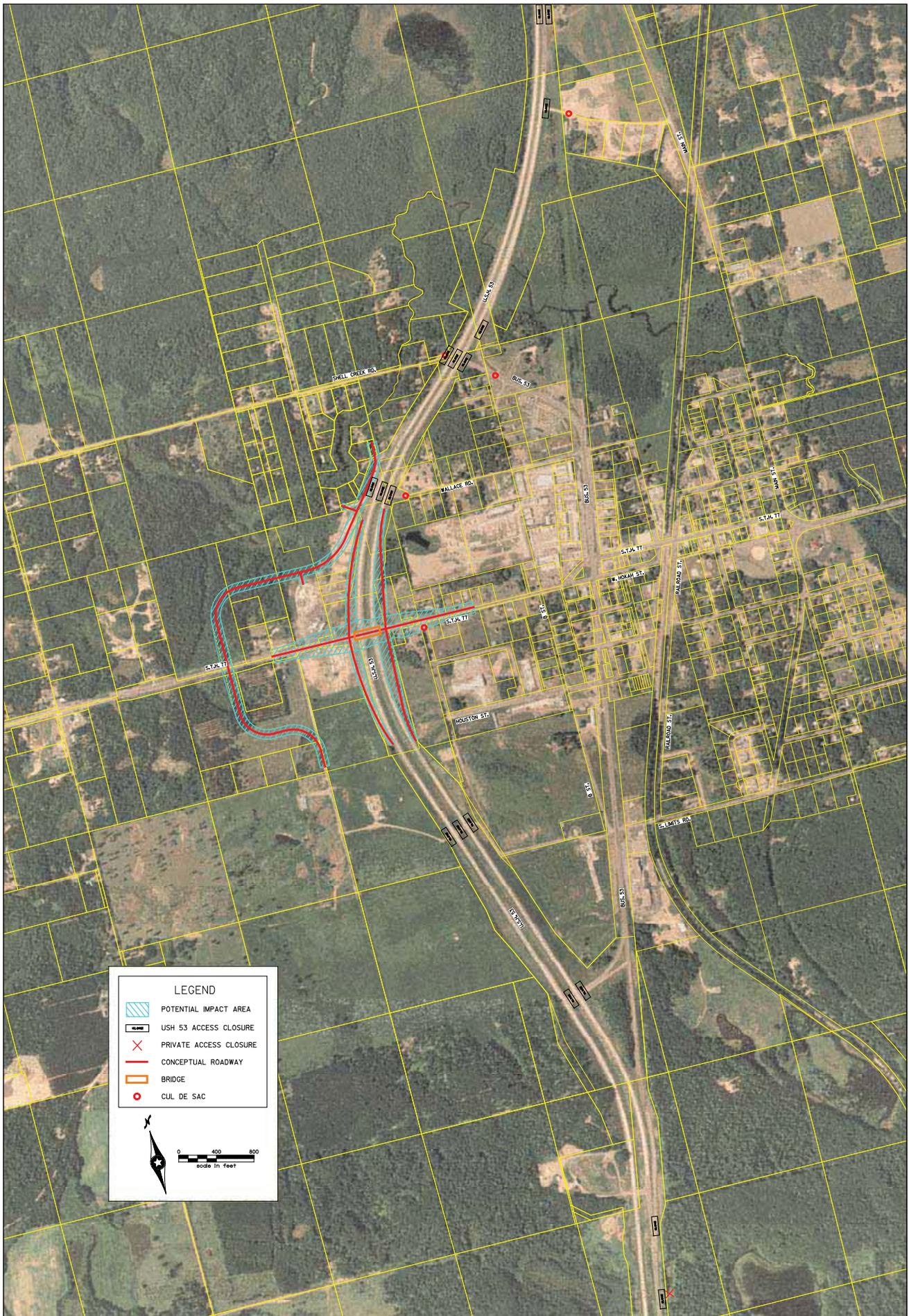


04/17/08



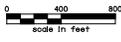
Alternative 3 - US 53 Corridor Preservation, Minong Area

STH 77 Split Diamond



LEGEND

-  POTENTIAL IMPACT AREA
-  USH 53 ACCESS CLOSURE
-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

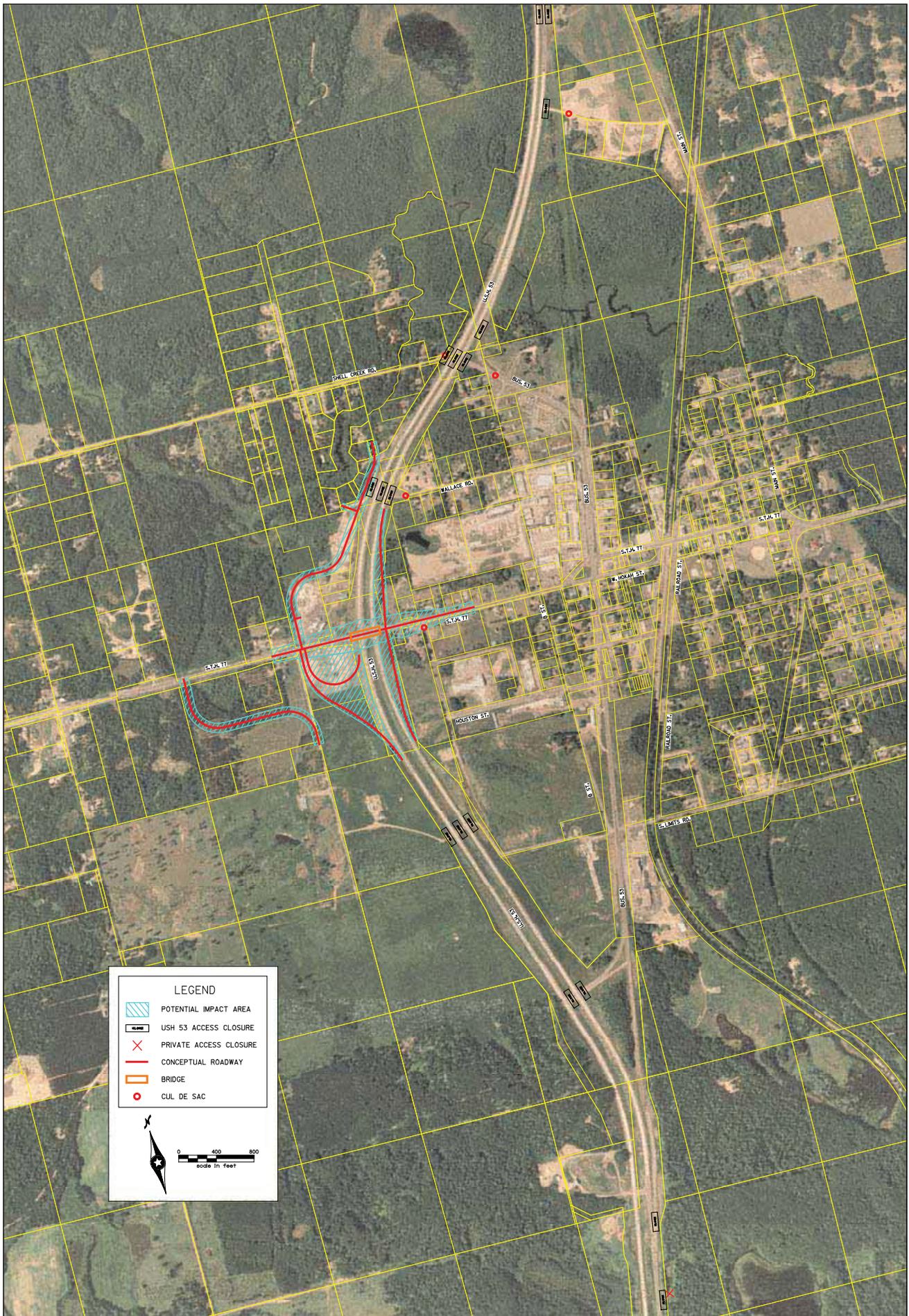
 

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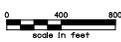
Alternative 4 - US 53 Corridor Preservation, Minong Area

STH 77 Tight Diamond



LEGEND

-  POTENTIAL IMPACT AREA
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-  PRIVATE ACCESS CLOSURE
-  CONCEPTUAL ROADWAY
-  BRIDGE
-  CUL DE SAC

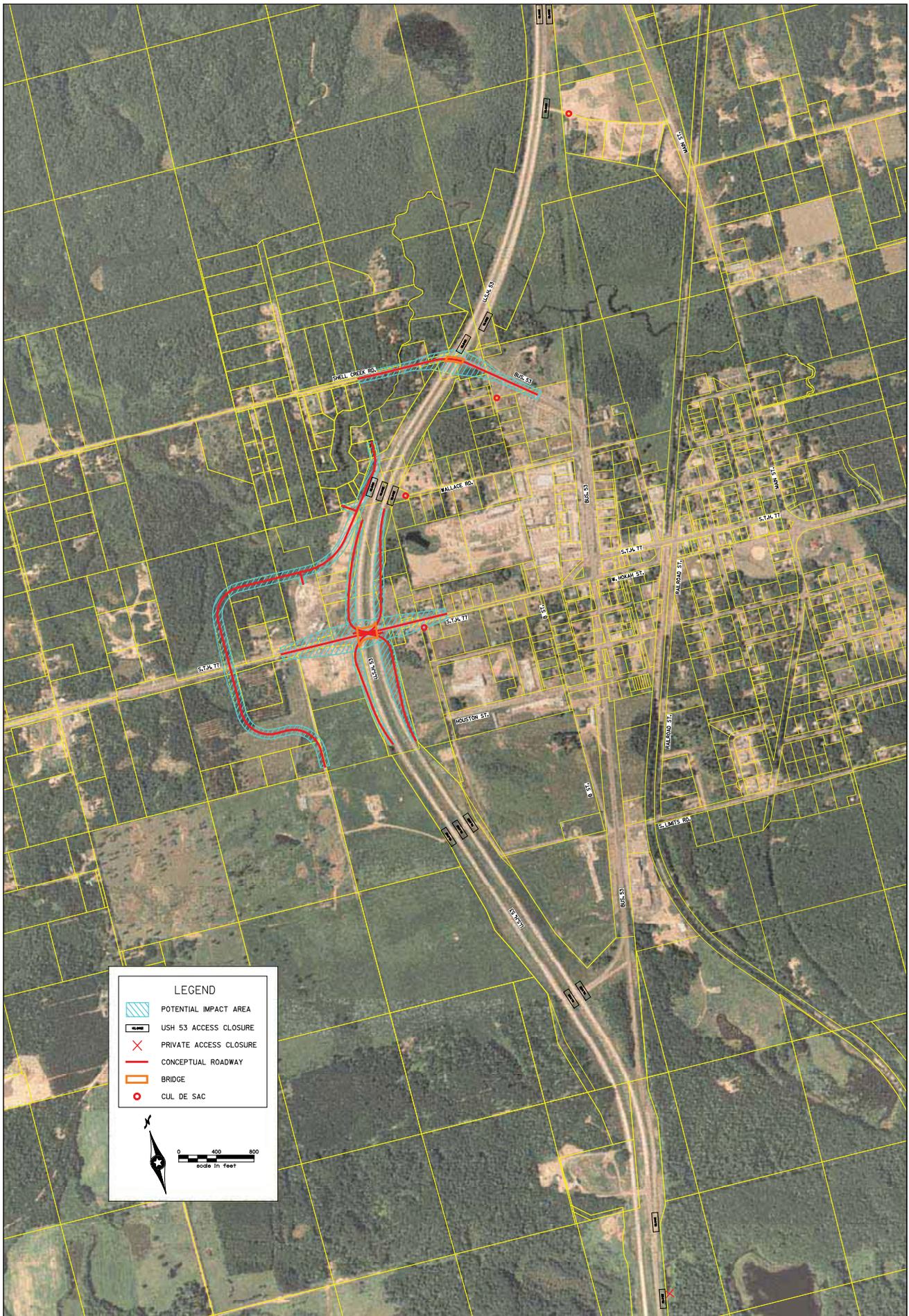



04/17/08



Alternative 5 - US 53 Corridor Preservation, Minong Area

STH 77 Folded Diamond, Loop in SW Quadrant



LEGEND

- POTENTIAL IMPACT AREA
- USH 53 ACCESS CLOSURE
- PRIVATE ACCESS CLOSURE
- CONCEPTUAL ROADWAY
- BRIDGE
- CUL DE SAC

0 400 800
 Scale In Feet

04/17/08



Corridor Preservation
Minong Area

Alternative 6 - US 53 Corridor Preservation, Minong Area

STH 77 Single-Point

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PRELIMINARY DESIGN

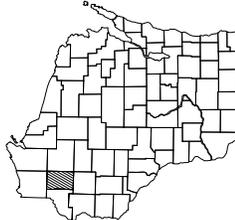
U.S.H. 53

STH-77 INTERCHANGE - ALTERNATIVE 5 WASHBURN COUNTY

ORDER OF SHEETS

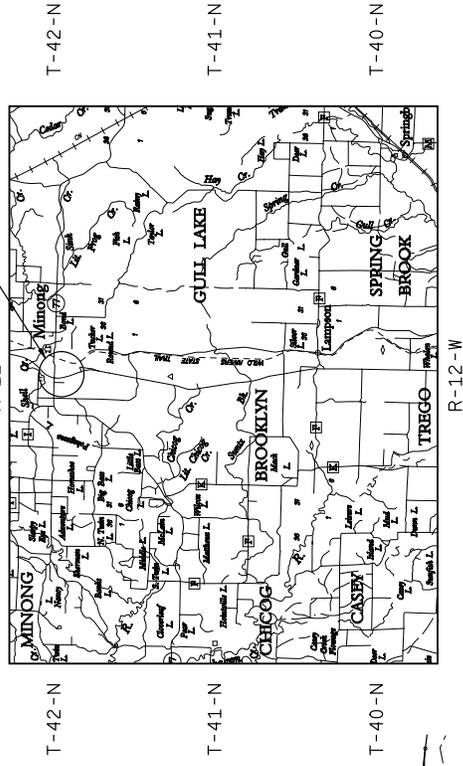
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Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right-of-Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plans
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

STATE PROJECT	FEDERAL PROJECT
PROJECT	CONTRACT



STATE PROJECT NUMBER
1190-01-00

PROJECT LOCATION



Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS) - Washburn County. Elevations are based on NGVD 29.

SCALE 0 4 MI.
LAYOUT

TOTAL NET LENGTH OF CENTERLINE = ML

PROJECT ID:
WITH: N/A

COUNTY: WASHBURN

- DESIGN DESIGNATION**
- A.A.D.T. (200X) =
 - A.A.D.T. (20XX) =
 - D.H.V. =
 - D.O. =
 - T. =
 - DESIGN SPEED =
 - ESALS =

- CONVENTIONAL SYMBOLS**
- PLAN
 - CORPORATE LIMITS
 - PROPERTY LINE
 - LOT LINE
 - LIMITED HIGHWAY EASEMENT
 - EXISTING RIGHT OF WAY
 - PROPOSED OR NEW R/W LINE
 - SLOPE INTERCEPT
 - REFERENCE LINE
 - EXISTING CULVERT
 - PROPOSED CULVERT (BOX OR PIPE)
 - COMBUSTIBLE FLUIDS
 - MARSH AREA
 - WOODED OR SHRUB AREA

- PROFILE**
- GRADE LINE
 - MARSH OR ROCK PROFILE (TO be noted as such)
 - SPECIAL DITCH
 - GRADE ELEVATION
 - CULVERT (Profile View)
 - UTILITIES
 - ELECTRIC
 - FIBER OPTIC
 - GAS
 - SANITARY SEWER
 - STORM SEWER
 - TELEPHONE
 - WATER
 - UTILITY PEDESTAL
 - POWER POLE
 - TELEPHONE POLE

ORIGINAL PLANS PREPARED BY
SRI Consulting Group, Inc.

DATE _____ (Signature) _____

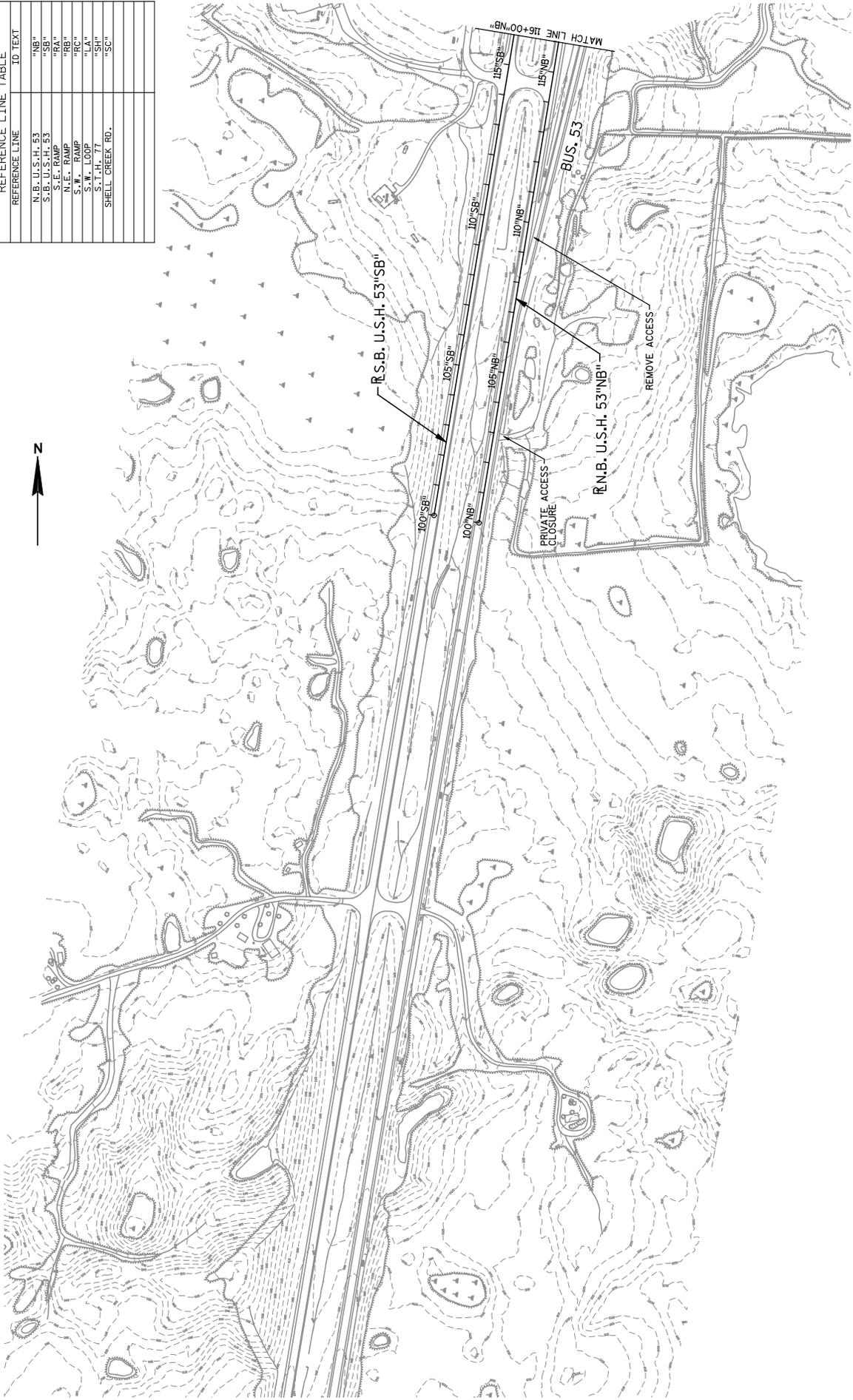
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY _____
 Surveyor _____
 Designer _____
 Project Manager _____
 Regional Examiner _____
 Regional Supervisor _____
 C.O. Examiner _____

APPROVED FOR THE DEPARTMENT
DATE: _____ (Signature) _____

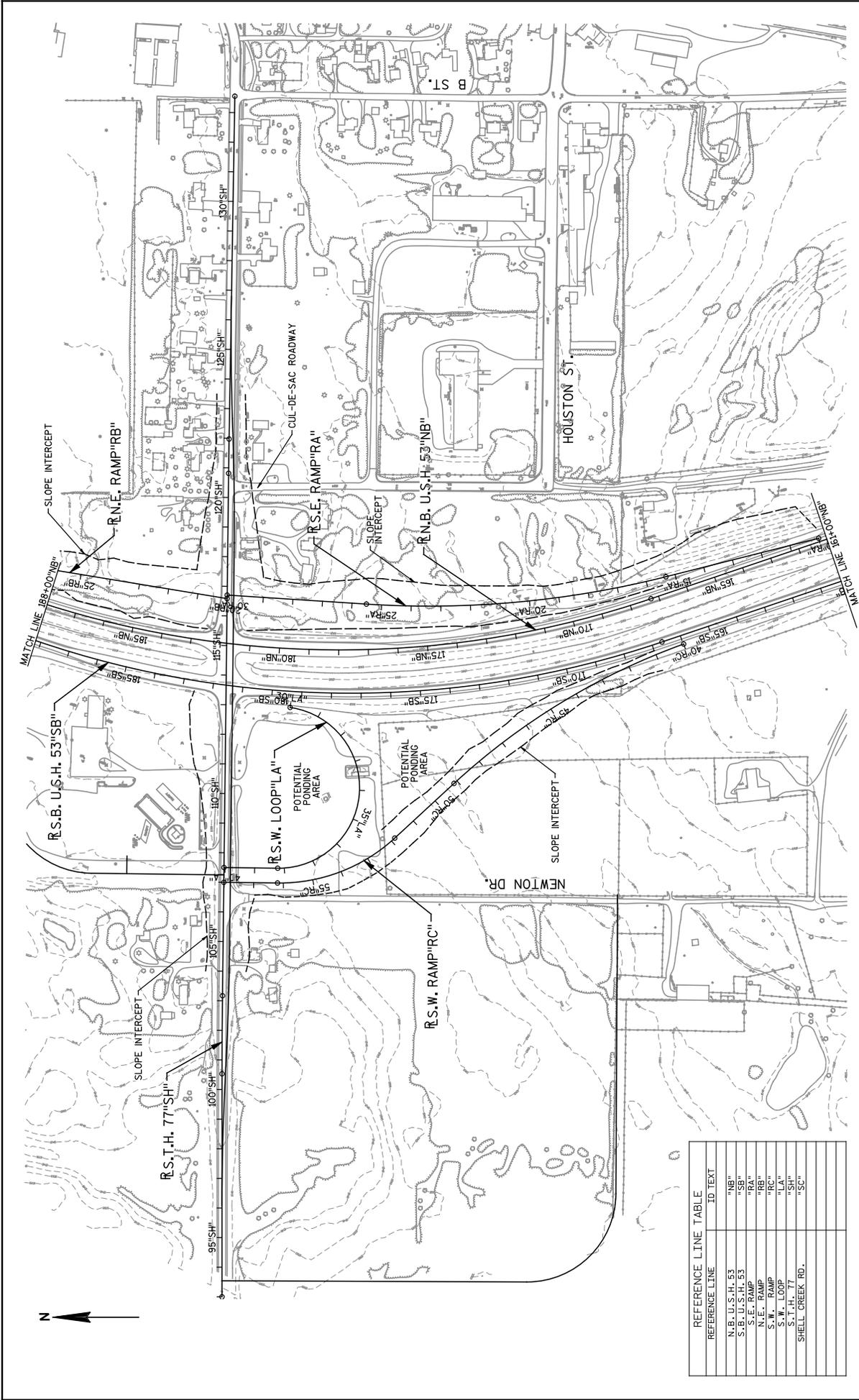
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N.E. RAMP	"RE"
S.W. RAMP	"RC"
S.W. LOOP	"LA"
STREET	"LA"
SHELLE CREEK RD.	"SC"



REFERENCE LINE	ID TEXT
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S.B. U.S.H. 53	"SB"
S.E. RAMP	"RA"
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S.W. RAMP	"RW"
S.W. LOOP	"LA"
SHELL CREEK RD.	"SC"

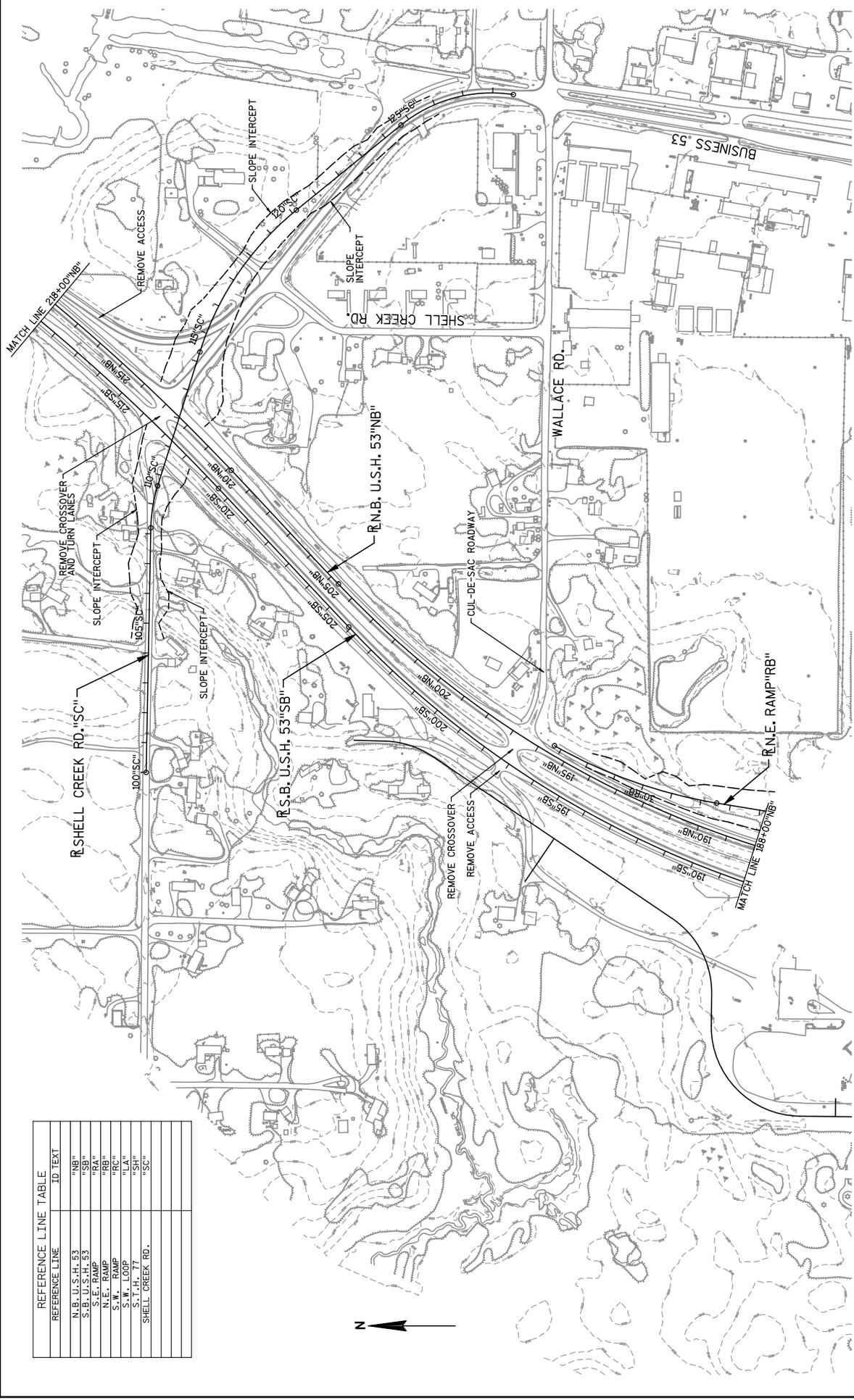




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N.E. RAMP	"RE"
S.W. RAMP	"RW"
S.W. LOOP	"LA"
S.T.C.H.E.T.	"STCH"
SHELL CREEK RD.	"SC"

PROJECT NO: 1190-01-00	COUNTY: WASHBURN	PROJECT OVERVIEW	SCALE, FEET 0 150 300	SHEET
HWY: U.S.H. 53				
PLOT BY: SRF Consulting Group				
PLOT DATE: 12/9/2008				
PLOT SCALE: 300.0000 ft / IN.				

REFERENCE LINE	ID TEXT
N.B. U.S.H. 53	"NB"
S.B. U.S.H. 53	"SB"
S.E. RAMP	"RA"
N.E. RAMP	"RB"
S.W. RAMP	"RC"
S.W. LOOP	"SL"
SHELL CREEK RD.	"SC"



PROJECT NO: 1190-01-00
 FILE NAME : h:\pro\jmbn\61190\N1-m\plan\022022_pp_05.dgn

HWY: U.S.H. 53

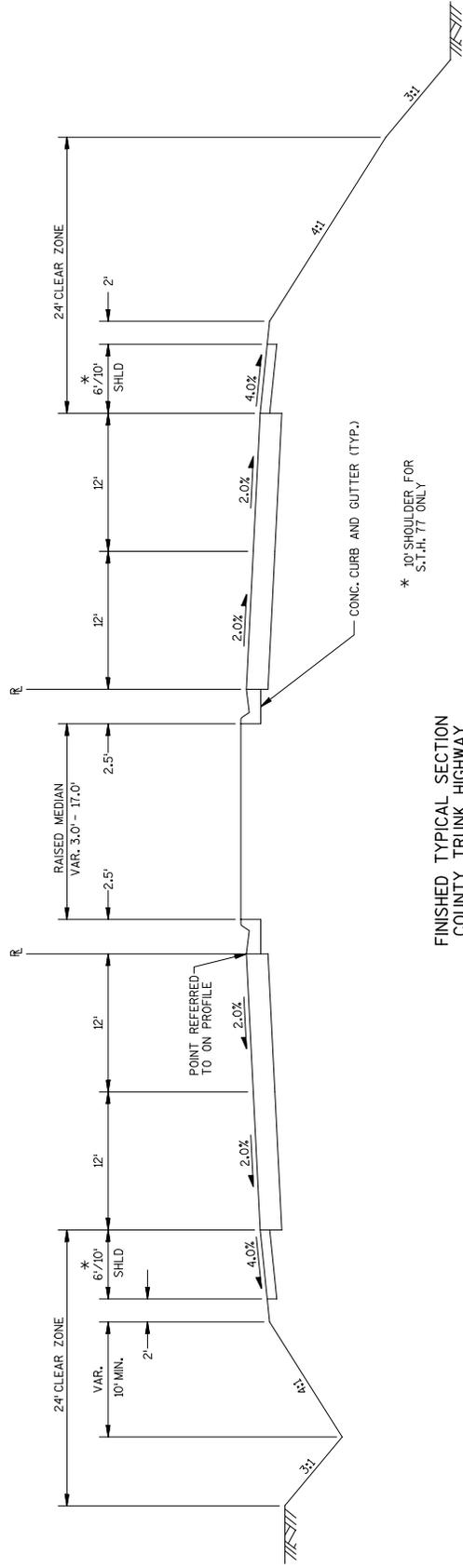
COUNTY: WASHBURN

PLOT DATE : 12/5/2008
 PLOT BY : SRF Consulting Group

PROJECT OVERVIEW

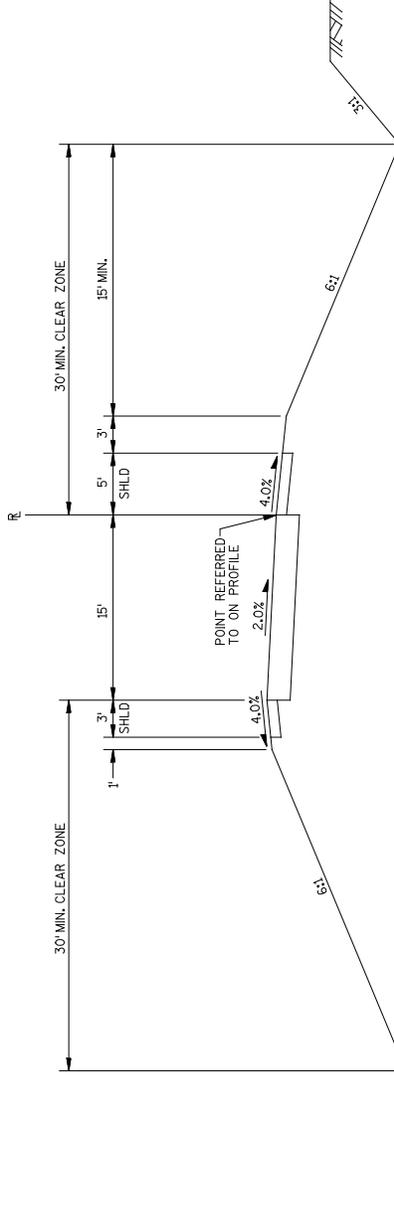
SCALE, FEET 0 150 300
 SHEET E

PLOT SCALE : 300.0000 FT / IN.



* 10' SHOULDER FOR S.T.H. 77 ONLY

**FINISHED TYPICAL SECTION
COUNTY TRUNK HIGHWAY
STATE TRUNK HIGHWAY**
DESIGN SPEED = 45



**FINISHED TYPICAL SECTION
INTERCHANGE RAMPS**
(REFERENCE LINE ON DRIVERS RIGHT)

PROJECT NO: 1190-01-00

HWY: U.S.H. 53

COUNTY: WASHBURN

FILE NAME : h:\pro\jmden\61190\h1-mb\plan\020301-17s.dgn

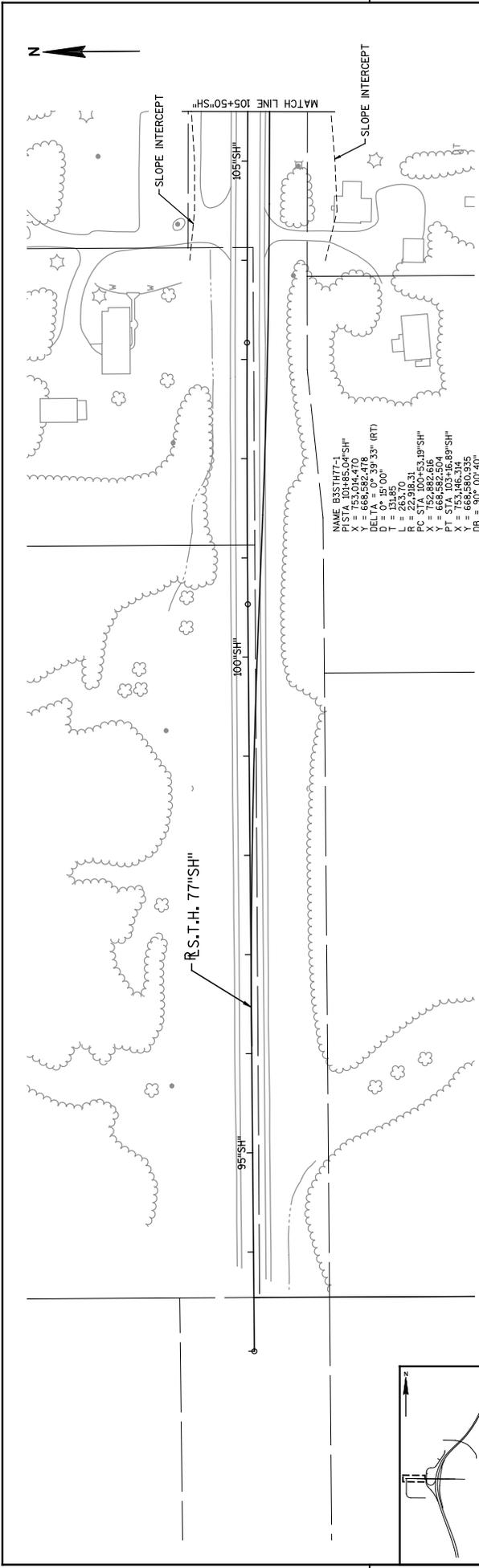
PLOT DATE : 12/5/2008

PLOT BY : SRF Consulting Group

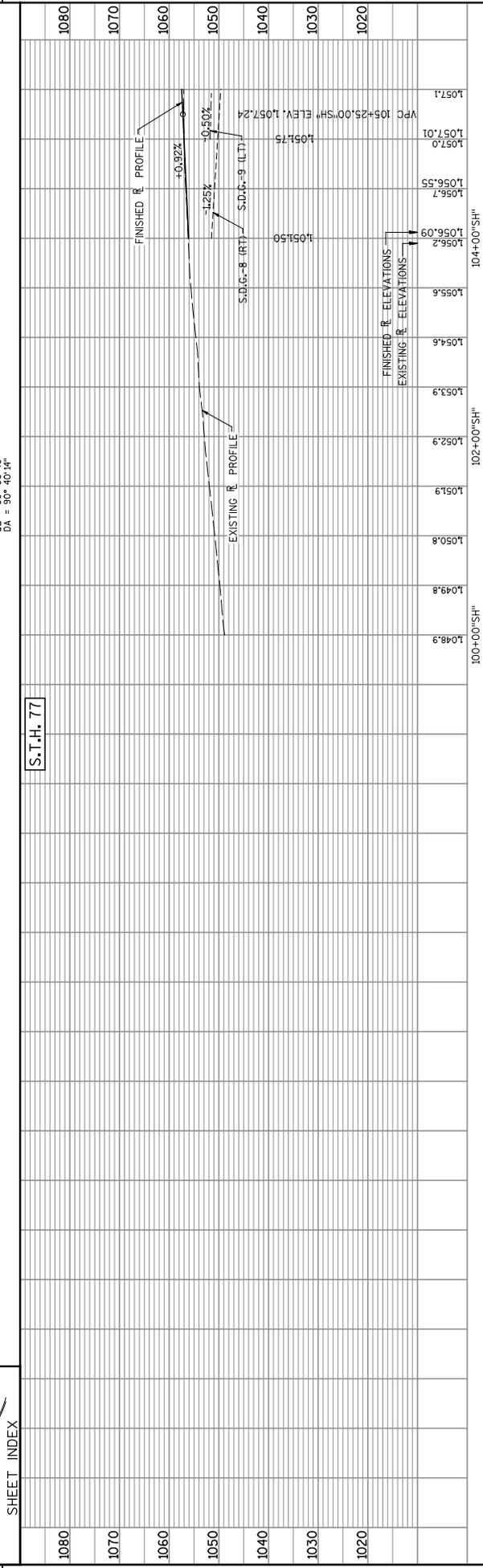
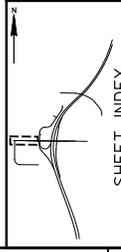
PLOT SCALE : 10,000 SF / IN.

SHEET

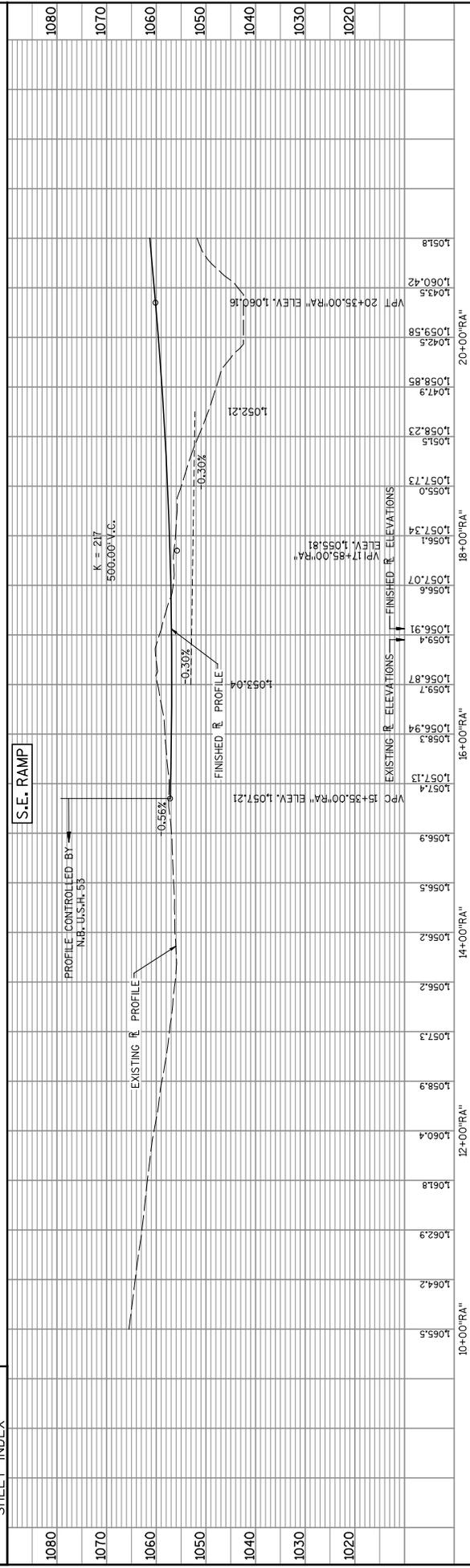
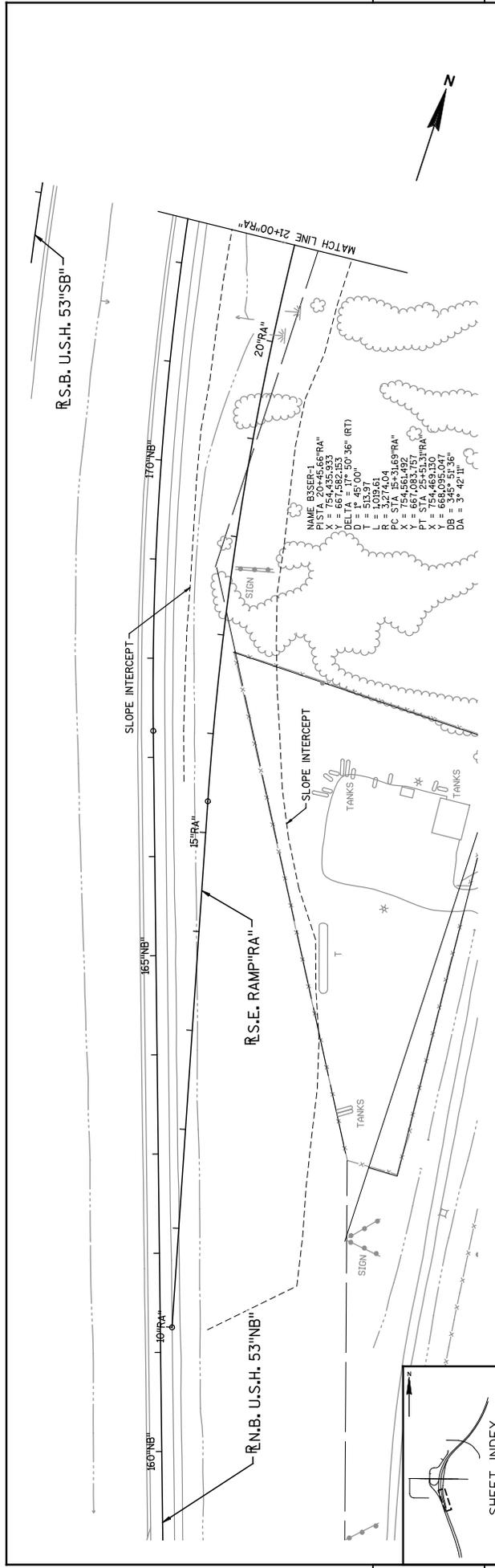
E



NAME B35TH77-1
 STA. 100+00.00 TO 105+50.00 SH"
 X = 753,004.470
 Y = 668,682.478
 DELTA = 90.33° 33" (RT)
 D = 15.00'
 T = 131.85'
 L = 263.70'
 P = 77.00'
 PC STA 100+53.18 SH"
 X = 752,882.616
 Y = 668,682.504
 DELTA = 90.33° 33" (RT)
 X = 753,146.316 SH"
 Y = 668,680.935
 DS = 90° 00' 40"
 DA = 90° 40' 34"

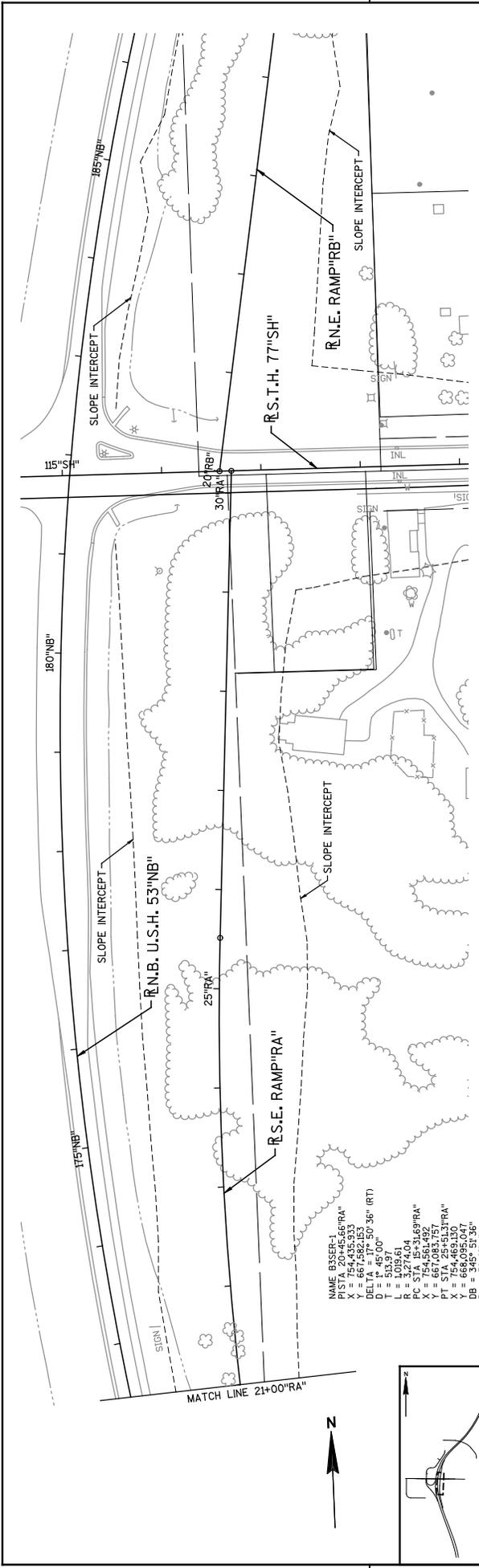


PROJECT NO: 1190-01-00	COUNTY: WASHBURN	PLAN AND PROFILE	SCALE, FEET	SHEET
HWY: U.S.H. 53			0 50 100	E
PLOT BY: SRF Consulting Group				
PLOT DATE: 12/6/2008				
PLOT SCALE: 100.0000 ft / IN.				

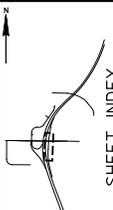


Station	Existing Elevation	Finished Elevation
1020	1020.0	1020.0
1030	1030.0	1030.0
1040	1040.0	1040.0
1050	1050.0	1050.0
1060	1060.0	1060.0
1070	1070.0	1070.0
1080	1080.0	1080.0

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE: FEET 0 50 100
 SHEET E
 PLOT BY: SRF Consulting Group
 PLOT DATE: 12/9/2008
 FILE NAME: h:\proj\jmdn\61190\11-m\plan\m\plan\060104_pp_05.dgn

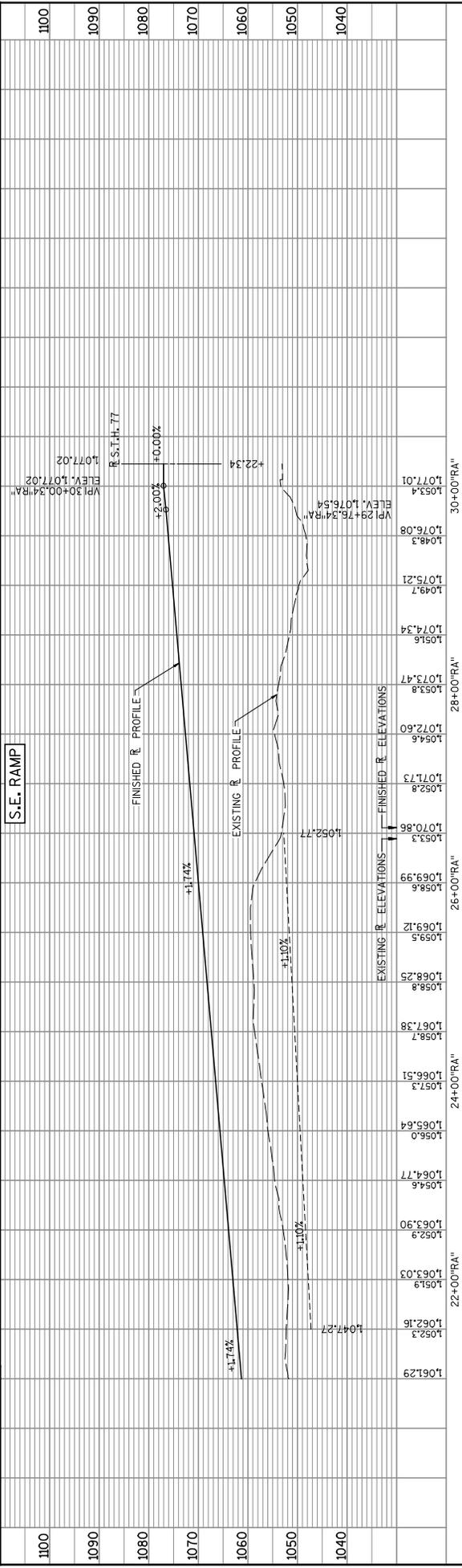


NAME B35EP-1
 PISTA 20+45.66"RA"
 X = 754.435,933
 Y = 667.727,150
 DELTA = 145° 36' (RT)
 D = 145' 00"
 T = 58.97
 R = 3274.04
 PC STA 15+31.69"RA"
 X = 754.561,492
 Y = 668.095,047
 PT STA 25+51.31"RA"
 X = 754.465,130
 Y = 668.095,047
 DB = 3° 42' 11"



5

5



STATION	ELEVATION	PROFILE TYPE
22+00"	1062.16	EXISTING R. ELEVATIONS
22+00"	1063.03	FINISHED R. ELEVATIONS
22+00"	1059.9	EXISTING R. ELEVATIONS
22+00"	1063.90	FINISHED R. ELEVATIONS
22+00"	1054.6	EXISTING R. ELEVATIONS
22+00"	1064.77	FINISHED R. ELEVATIONS
22+00"	1056.0	EXISTING R. ELEVATIONS
22+00"	1065.64	FINISHED R. ELEVATIONS
22+00"	1057.3	EXISTING R. ELEVATIONS
22+00"	1066.51	FINISHED R. ELEVATIONS
22+00"	1058.7	EXISTING R. ELEVATIONS
22+00"	1061.38	FINISHED R. ELEVATIONS
22+00"	1058.8	EXISTING R. ELEVATIONS
22+00"	1068.25	FINISHED R. ELEVATIONS
22+00"	1059.5	EXISTING R. ELEVATIONS
22+00"	1069.12	FINISHED R. ELEVATIONS
22+00"	1058.6	EXISTING R. ELEVATIONS
22+00"	1069.99	FINISHED R. ELEVATIONS
22+00"	1053.3	EXISTING R. ELEVATIONS
22+00"	1070.86	FINISHED R. ELEVATIONS
22+00"	1052.8	EXISTING R. ELEVATIONS
22+00"	1071.73	FINISHED R. ELEVATIONS
22+00"	1054.6	EXISTING R. ELEVATIONS
22+00"	1072.60	FINISHED R. ELEVATIONS
22+00"	1053.8	EXISTING R. ELEVATIONS
22+00"	1073.47	FINISHED R. ELEVATIONS
22+00"	1051.6	EXISTING R. ELEVATIONS
22+00"	1074.34	FINISHED R. ELEVATIONS
22+00"	1049.7	EXISTING R. ELEVATIONS
22+00"	1075.21	FINISHED R. ELEVATIONS
22+00"	1048.3	EXISTING R. ELEVATIONS
22+00"	1076.08	FINISHED R. ELEVATIONS
22+00"	1053.4	EXISTING R. ELEVATIONS
22+00"	1077.01	FINISHED R. ELEVATIONS

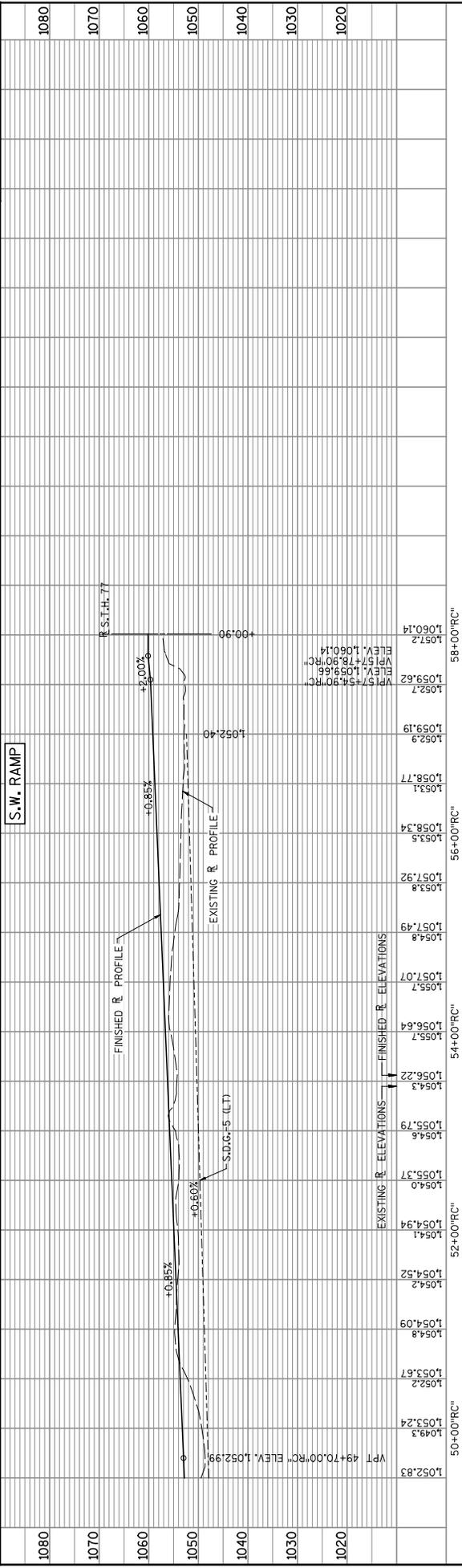
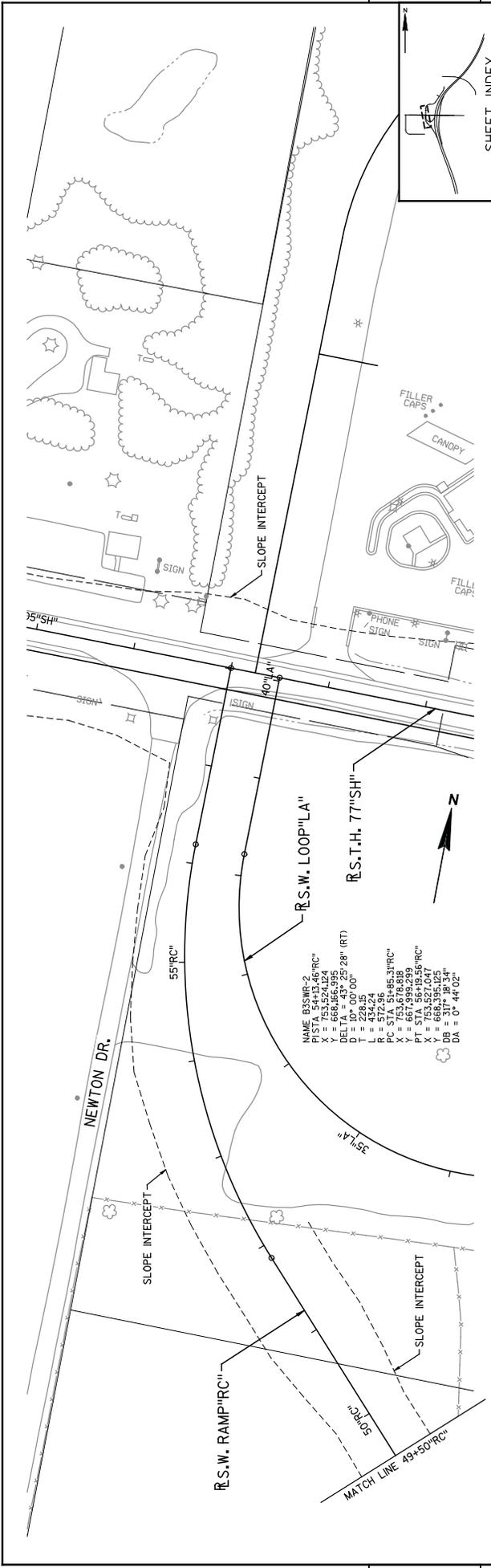
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE: FEET 0 50 100
 SHEET E

PLAN AND PROFILE
 PLOT BY: SRP Consulting Group

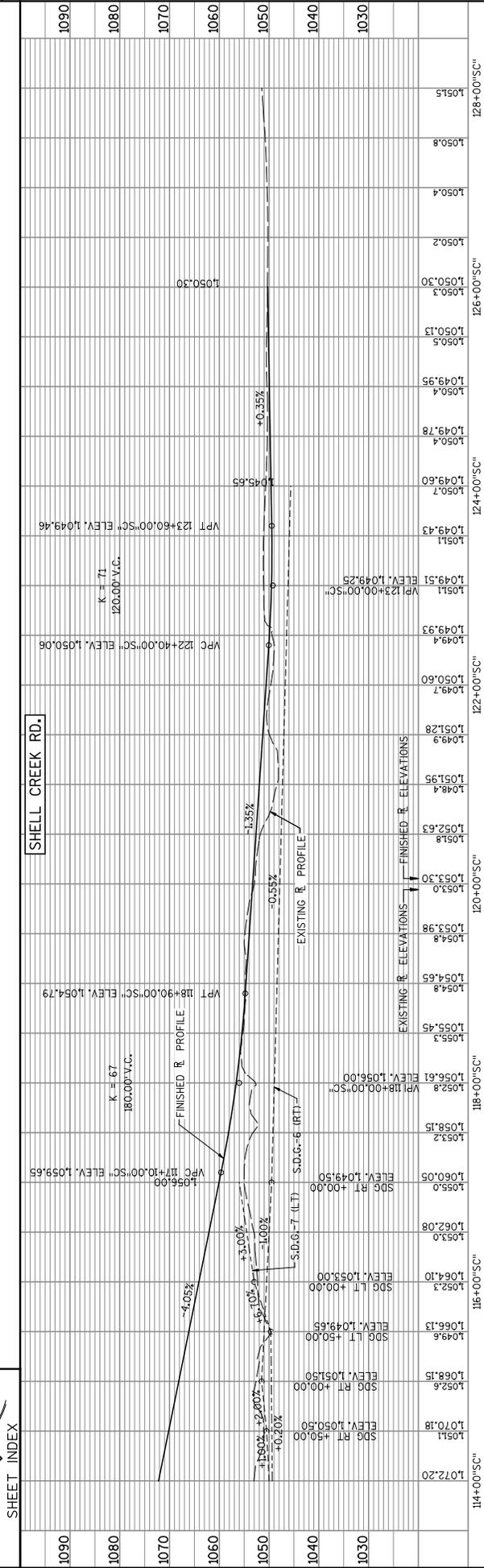
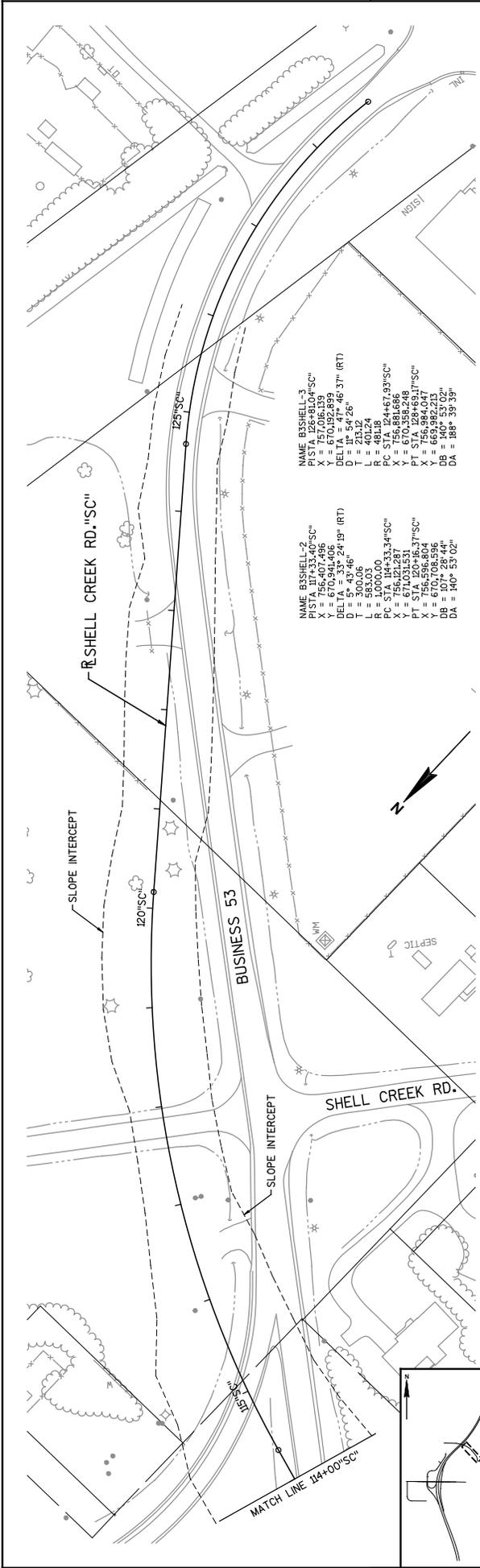
SCALE: FEET 0 50 100
 SHEET E

PLANNING DATE: 12/5/2008

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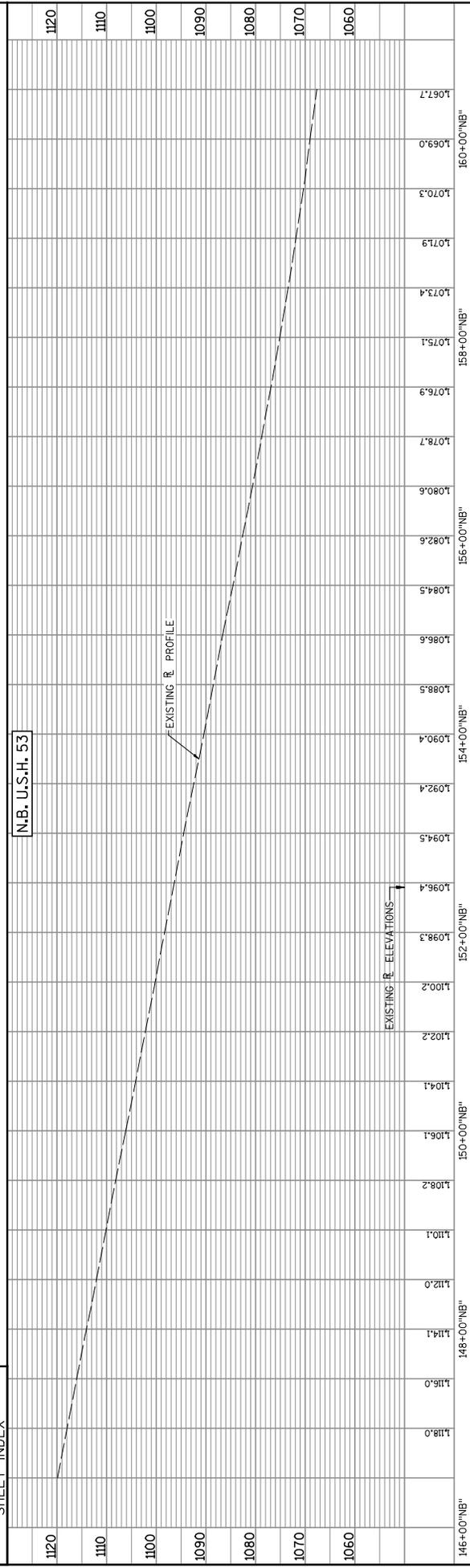
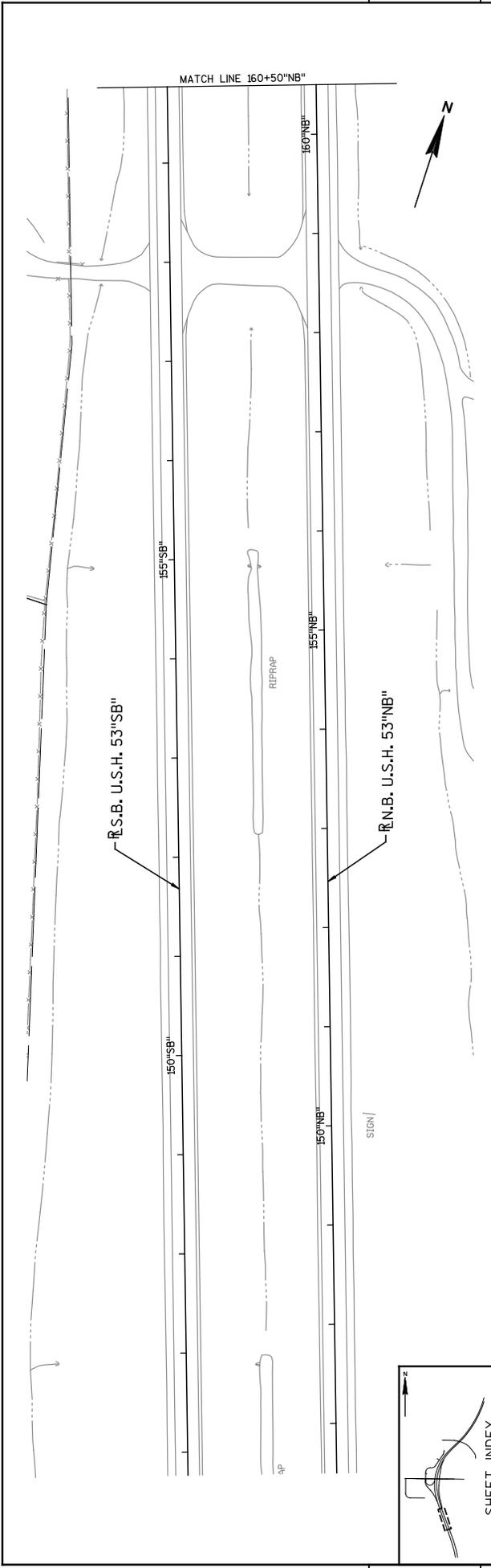


PROJECT NO: 1190-01-00
HWY: U.S.H. 53
COUNTY: WASHBURN
PLAN AND PROFILE
SCALE, FEET: 0 50 100
SHEET
PLOT BY: SRF Consulting Group
PLOT DATE: 12/9/2008
FILE NAME: h:\pro\jmdm\6190\h1-m\plan\060106_pp-b5-dp



STATION	ELEVATION	DESCRIPTION
1072.20	1050.00	SDG RT +50.00
1072.20	1050.50	ELEV. 1050.50
1072.20	1051.50	ELEV. 1051.50
1072.20	1052.63	ELEV. 1052.63
1072.20	1053.00	ELEV. 1053.00
1072.20	1053.98	ELEV. 1053.98
1072.20	1054.8	ELEV. 1054.8
1072.20	1055.45	ELEV. 1055.45
1072.20	1056.61	ELEV. 1056.61
1072.20	1057.8	ELEV. 1057.8
1072.20	1058.15	ELEV. 1058.15
1072.20	1059.2	ELEV. 1059.2
1072.20	1060.05	ELEV. 1060.05
1072.20	1060.05	SDG RT +00.00
1072.20	1060.05	ELEV. 1060.05
1072.20	1062.08	ELEV. 1062.08
1072.20	1063.0	ELEV. 1063.0
1072.20	1064.10	ELEV. 1064.10
1072.20	1065.3	ELEV. 1065.3
1072.20	1066.13	ELEV. 1066.13
1072.20	1067.4	ELEV. 1067.4
1072.20	1068.15	ELEV. 1068.15
1072.20	1069.4	ELEV. 1069.4
1072.20	1070.18	ELEV. 1070.18
1072.20	1071.18	ELEV. 1071.18
1072.20	1072.20	ELEV. 1072.20
1072.20	1073.0	ELEV. 1073.0
1072.20	1074.10	ELEV. 1074.10
1072.20	1075.3	ELEV. 1075.3
1072.20	1076.61	ELEV. 1076.61
1072.20	1077.8	ELEV. 1077.8
1072.20	1078.15	ELEV. 1078.15
1072.20	1079.2	ELEV. 1079.2
1072.20	1080.05	ELEV. 1080.05
1072.20	1080.05	SDG RT +00.00
1072.20	1080.05	ELEV. 1080.05
1072.20	1082.08	ELEV. 1082.08
1072.20	1083.0	ELEV. 1083.0
1072.20	1084.10	ELEV. 1084.10
1072.20	1085.3	ELEV. 1085.3
1072.20	1086.13	ELEV. 1086.13
1072.20	1087.4	ELEV. 1087.4
1072.20	1088.15	ELEV. 1088.15
1072.20	1089.4	ELEV. 1089.4
1072.20	1090.05	ELEV. 1090.05
1072.20	1090.05	SDG RT +00.00
1072.20	1090.05	ELEV. 1090.05

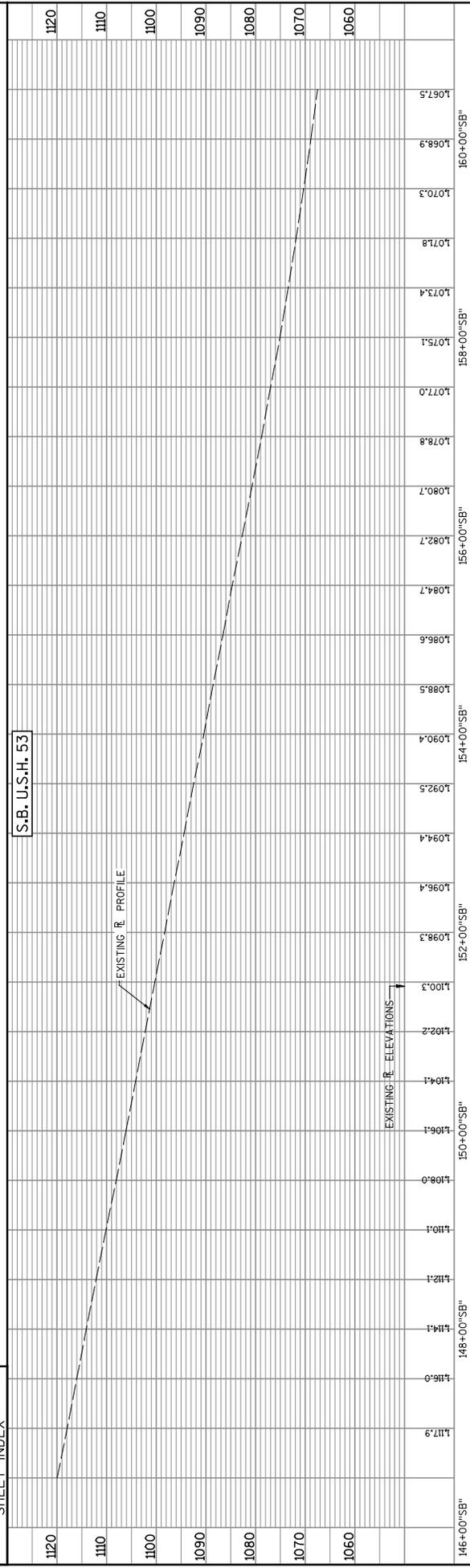
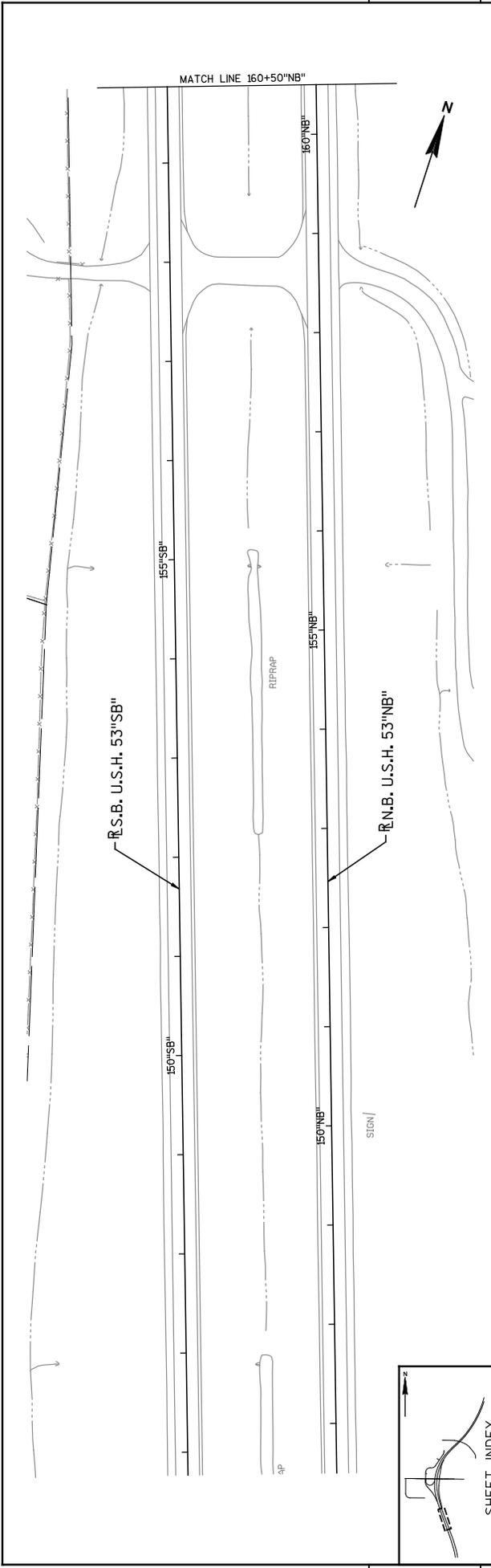
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET 0 50 100
 SHEET E
 PLOT BY: SRF Consulting Group
 PLOT DATE: 12/5/2008
 FILE NAME: h:\proj\jmdm\6189\h1-m\plan\060111_pp-05.dgn



Station	Elevation
146+00	1060
148+00	1060
150+00	1060
152+00	1060
154+00	1060
156+00	1060
158+00	1060
160+00	1060

PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET 0 50 100 SHEET E
 PLOT BY: SRF Consulting Group
 PLOT DATE: 12/5/2008
 PLOT SCALE: 100.0000 SF / IN.

SHEET INDEX



1120	1110	1100	1090	1080	1070	1060	1067.5	1068.9	1070.3	1071.8	1073.4	1075.1	1077.0	1078.8	1080.7	1082.7	1084.7	1086.6	1088.5	1090.4	1092.5	1094.4	1096.4	1098.3	1100.3	1102.2	1104.1	1106.1	1108.0	1109.1	1111.1	1114.1	1116.0	1117.9															
										158+00'SB"										160+00'SB"																													
146+00'SB"										150+00'SB"										152+00'SB"										154+00'SB"										156+00'SB"									

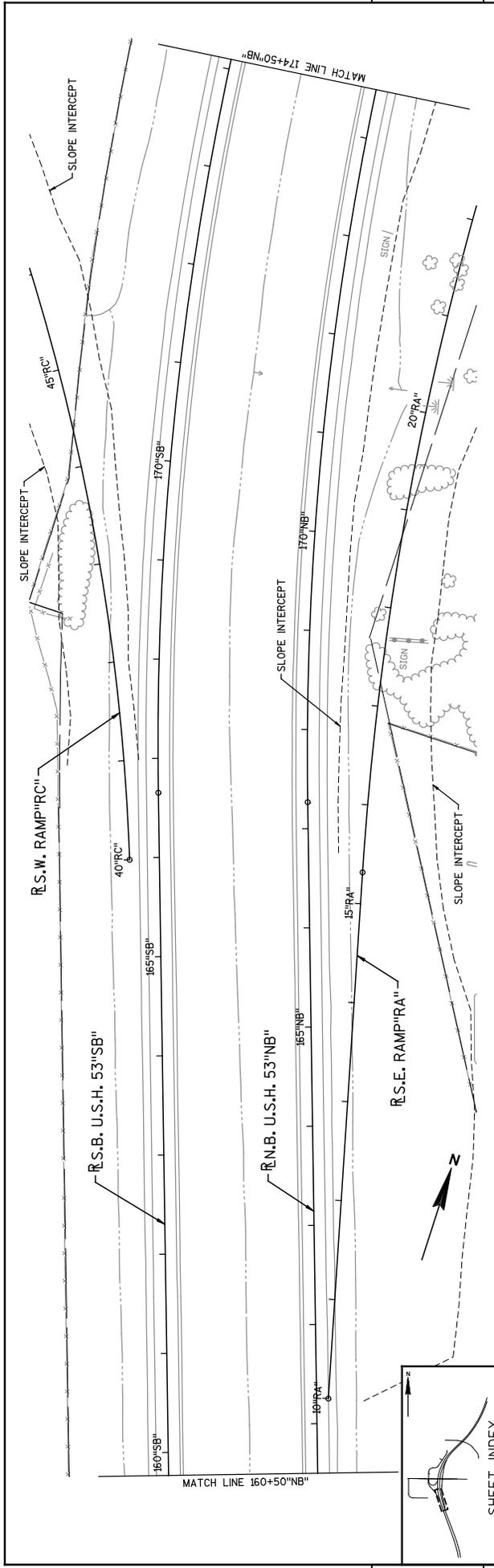
SCALE, FEET 0 50 100 SHEET E

PLAN AND PROFILE PLOT BY : SRF Consulting Group

COUNTY: WASHBURN PLOT DATE : 12/5/2008

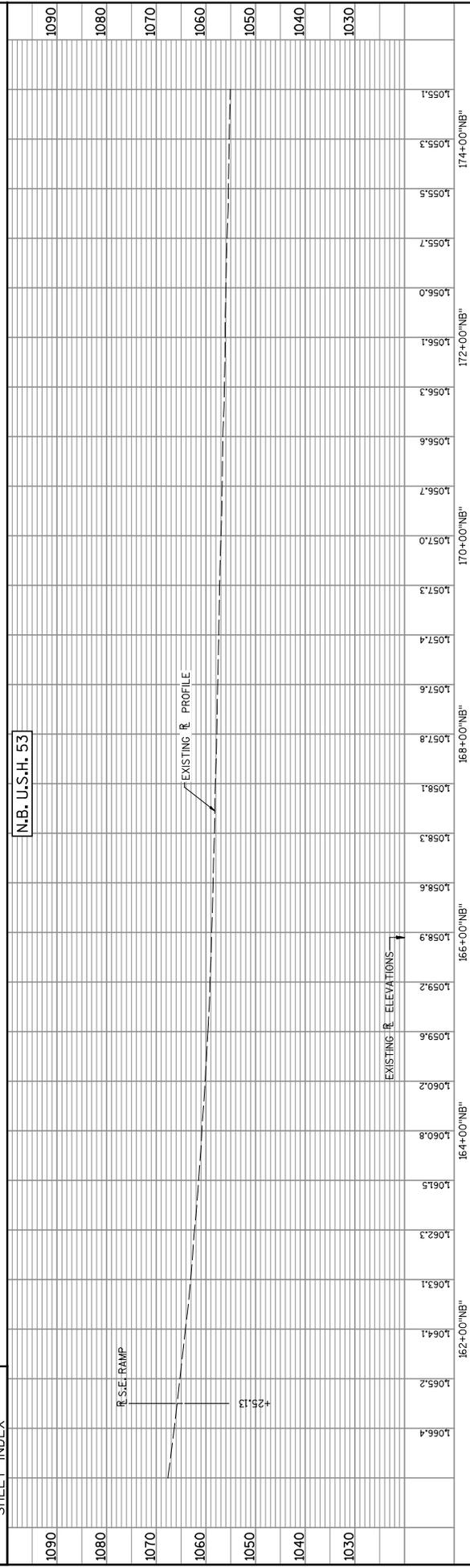
HWY: U.S.H. 53

PROJECT NO: 1190-01-00
 FILE NAME : h:\proj\jmsr\6190\h1-m\plan\060113_pp-b5.dgn



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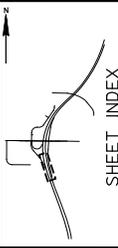
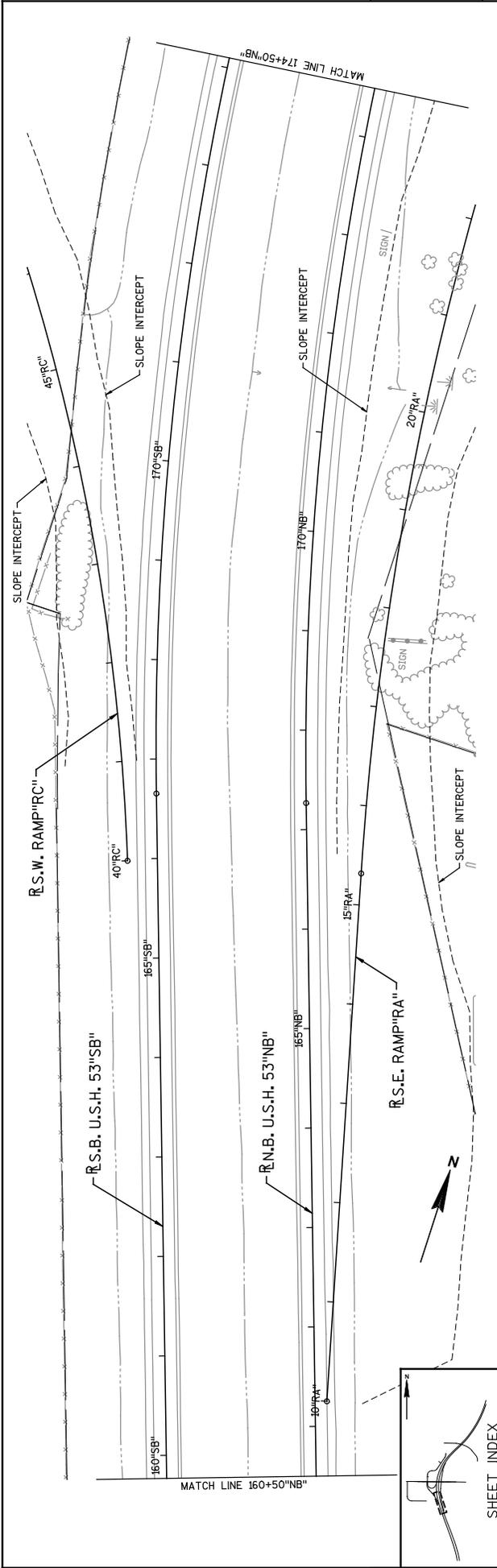
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STATION	ELEVATION	PLAN AND PROFILE	SCALE, FEET	SHEET
162+00	1066.4	162+00"NB"	0	
164+00	1062.3	164+00"NB"	50	
166+00	1059.6	166+00"NB"	100	
168+00	1058.1	168+00"NB"		
170+00	1057.4	170+00"NB"		
172+00	1056.7	172+00"NB"		
174+00	1055.1	174+00"NB"		

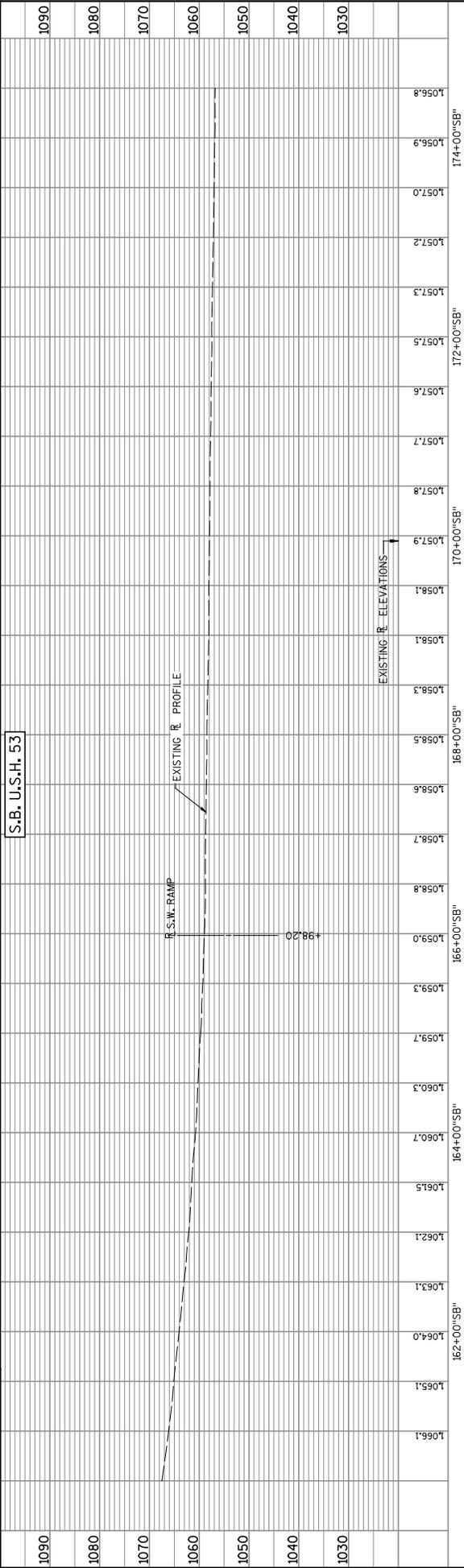
PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLOT DATE: 12/5/2008
 PLOT BY: SRP Consulting Group
 PLOT SCALE: 100.0000 ft / IN.

SHEET INDEX



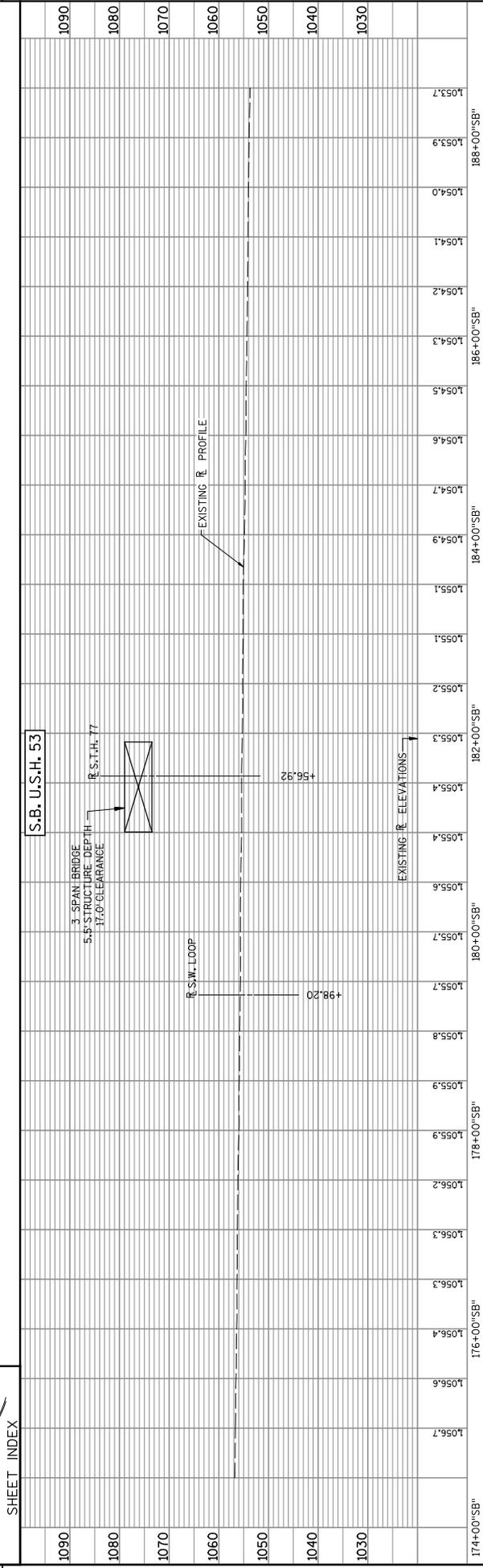
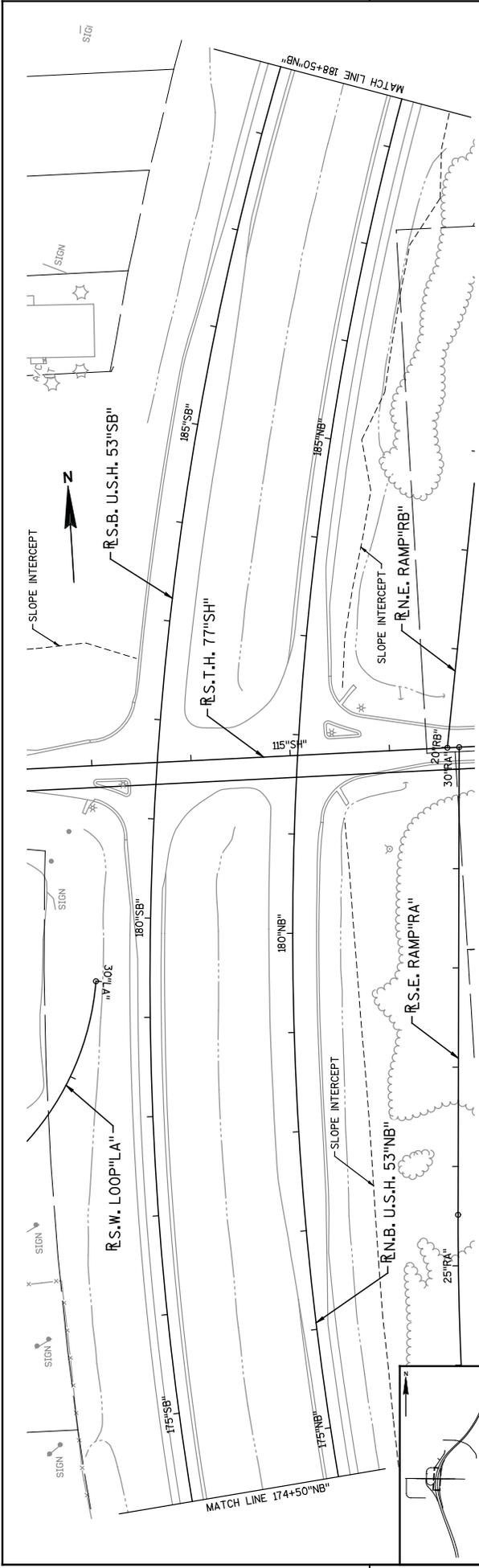
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PROJECT NO: 1190-01-00	COUNTY: WASHBURN	PLAN AND PROFILE	SHEET
HWY: U.S.H. 53	SCALE, FEET 0 50 100		
PLOT BY: SRF Consulting Group			
PLOT DATE: 12/5/2008			
PLOT SCALE: 100.0000 SF / IN.			

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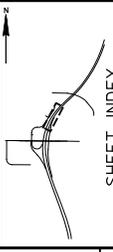
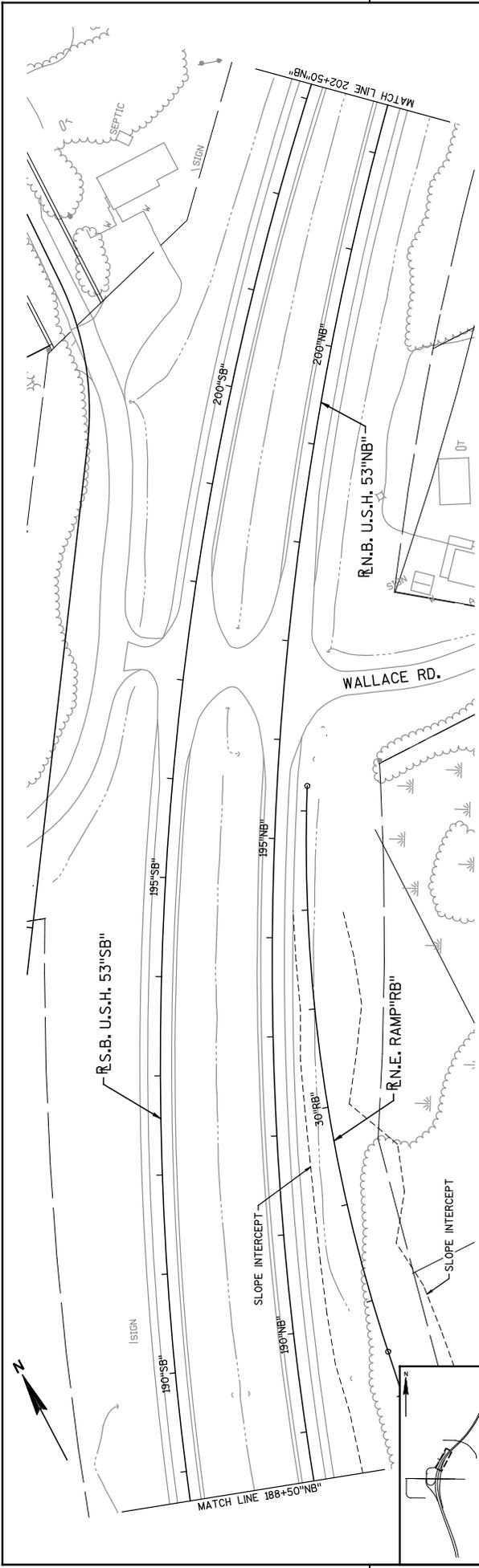


Station	Elevation
174+00'SB	1056.7
176+00'SB	1056.6
178+00'SB	1056.2
180+00'SB	1055.9
182+00'SB	1055.4
184+00'SB	1054.9
186+00'SB	1054.0
188+00'SB	1053.7

5

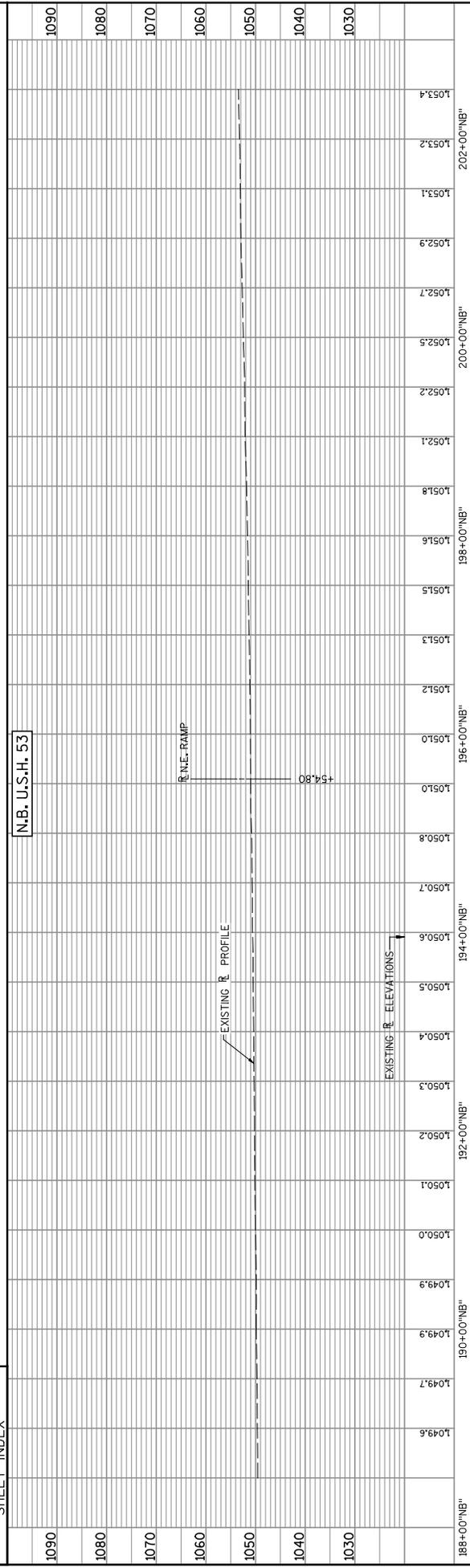
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PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100 SHEET
 PLOT BY: SRF Consulting Group
 PLOT DATE: 12/5/2008
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 PLOT SCALE: 100.0000 sf / in.

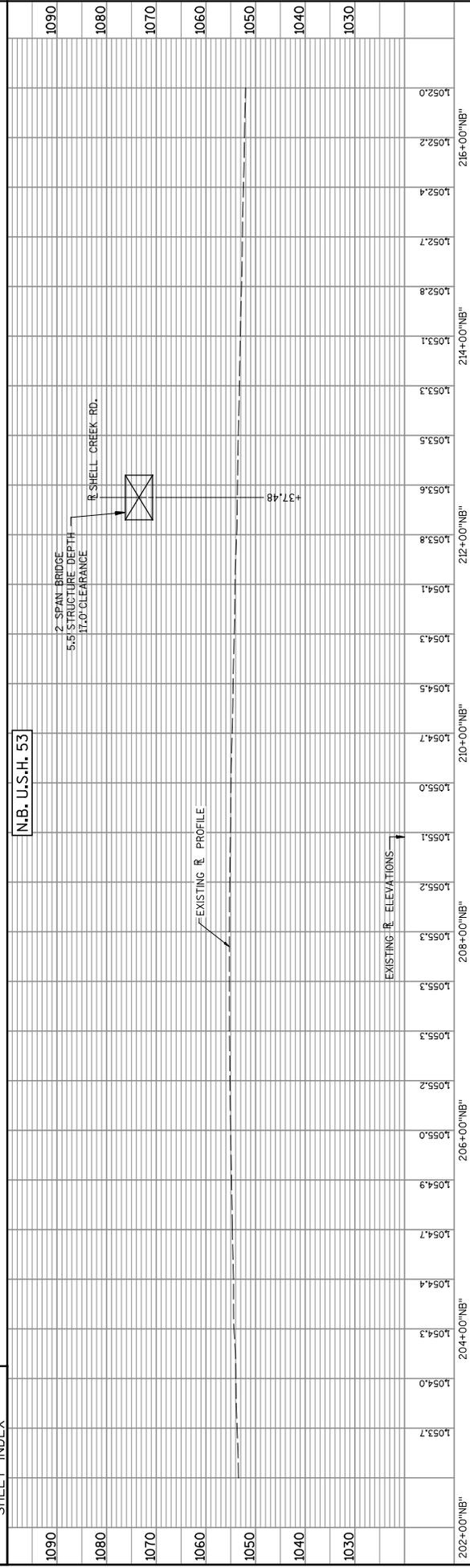
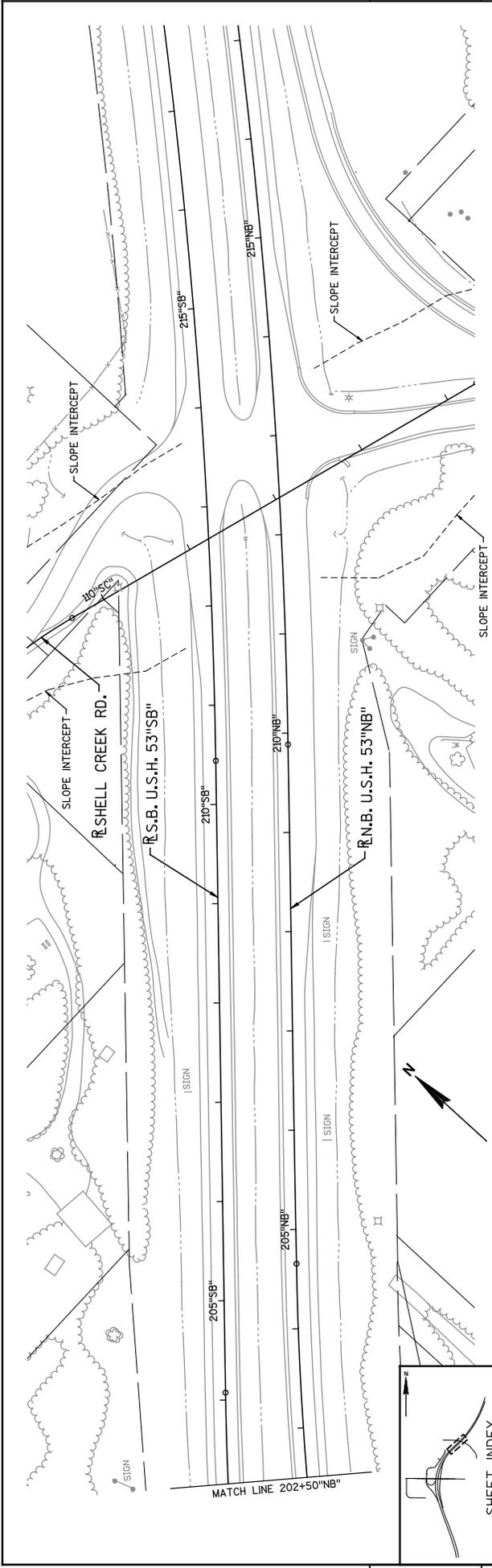


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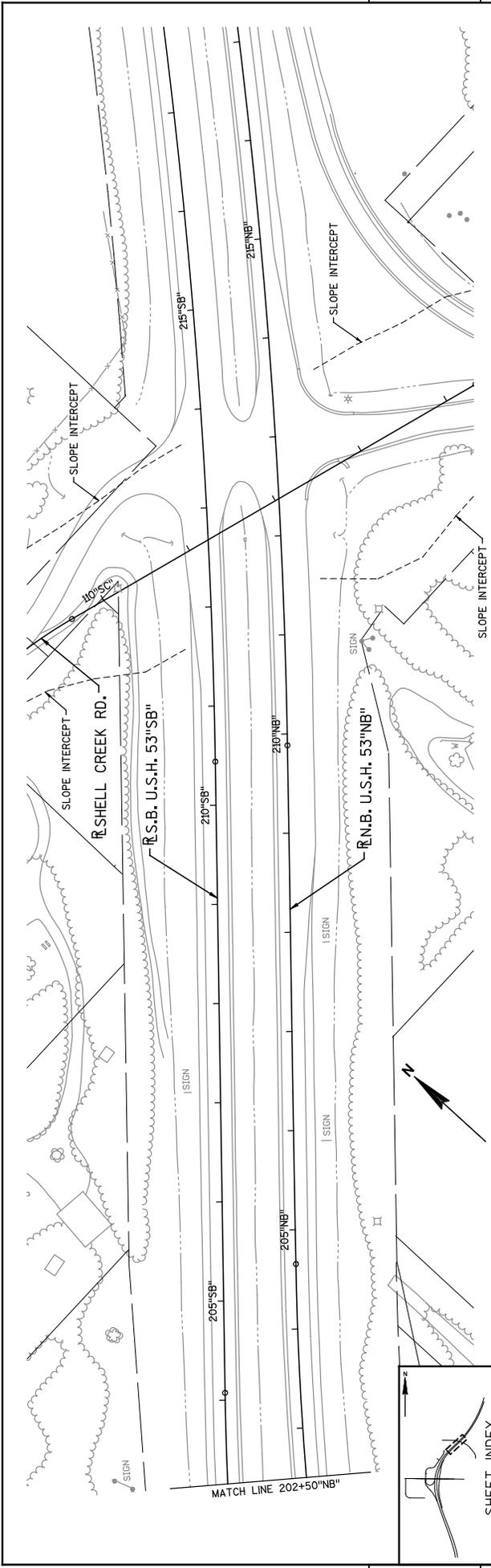
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Station	Elevation	Station	Elevation
188+00	1049.6	194+00	1050.3
188+10	1049.7	194+10	1050.4
188+20	1049.9	194+20	1050.5
188+30	1049.9	194+30	1050.6
188+40	1049.9	194+40	1050.7
188+50	1049.9	194+50	1050.8
188+60	1049.9	194+60	1051.0
188+70	1049.9	194+70	1051.0
188+80	1049.9	194+80	1051.2
188+90	1049.9	194+90	1051.3
189+00	1049.9	195+00	1051.5
189+10	1049.9	195+10	1051.6
189+20	1049.9	195+20	1051.8
189+30	1049.9	195+30	1052.1
189+40	1049.9	195+40	1052.2
189+50	1049.9	195+50	1052.5
189+60	1049.9	195+60	1052.7
189+70	1049.9	195+70	1052.9
189+80	1049.9	195+80	1053.1
189+90	1049.9	195+90	1053.2
190+00	1049.9	196+00	1053.4
190+10	1049.9	196+10	
190+20	1049.9	196+20	
190+30	1049.9	196+30	
190+40	1049.9	196+40	
190+50	1049.9	196+50	
190+60	1049.9	196+60	
190+70	1049.9	196+70	
190+80	1049.9	196+80	
190+90	1049.9	196+90	
191+00	1049.9	197+00	
191+10	1049.9	197+10	
191+20	1049.9	197+20	
191+30	1049.9	197+30	
191+40	1049.9	197+40	
191+50	1049.9	197+50	
191+60	1049.9	197+60	
191+70	1049.9	197+70	
191+80	1049.9	197+80	
191+90	1049.9	197+90	
192+00	1049.9	198+00	
192+10	1049.9	198+10	
192+20	1049.9	198+20	
192+30	1049.9	198+30	
192+40	1049.9	198+40	
192+50	1049.9	198+50	
192+60	1049.9	198+60	
192+70	1049.9	198+70	
192+80	1049.9	198+80	
192+90	1049.9	198+90	
193+00	1049.9	199+00	
193+10	1049.9	199+10	
193+20	1049.9	199+20	
193+30	1049.9	199+30	
193+40	1049.9	199+40	
193+50	1049.9	199+50	
193+60	1049.9	199+60	
193+70	1049.9	199+70	
193+80	1049.9	199+80	
193+90	1049.9	199+90	
194+00	1049.9	200+00	
194+10	1049.9	200+10	
194+20	1049.9	200+20	
194+30	1049.9	200+30	
194+40	1049.9	200+40	
194+50	1049.9	200+50	
194+60	1049.9	200+60	
194+70	1049.9	200+70	
194+80	1049.9	200+80	
194+90	1049.9	200+90	
195+00	1049.9	201+00	
195+10	1049.9	201+10	
195+20	1049.9	201+20	
195+30	1049.9	201+30	
195+40	1049.9	201+40	
195+50	1049.9	201+50	
195+60	1049.9	201+60	
195+70	1049.9	201+70	
195+80	1049.9	201+80	
195+90	1049.9	201+90	
196+00	1049.9	202+00	
196+10	1049.9	202+10	
196+20	1049.9	202+20	
196+30	1049.9	202+30	
196+40	1049.9	202+40	
196+50	1049.9	202+50	
196+60	1049.9	202+60	
196+70	1049.9	202+70	
196+80	1049.9	202+80	
196+90	1049.9	202+90	
197+00	1049.9	203+00	
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PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET 0 50 100 SHEET E
 PLOT BY: SRF Consulting Group
 PLOT DATE: 12/5/2008
 FILE NAME: h:\pro\jms\61190\N1-m\plan\060120_pp-b5.dgn



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1060	1050.8	
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1040	1051.4	
1030	1051.7	
	1051.9	
	1052.2	
	1052.6	
	1052.9	
	1053.2	
	1053.4	EXISTING R ELEVATIONS
	1053.7	
	1053.9	
	1054.1	
	1054.1	
	1054.2	
	1054.2	
	1054.2	
	1054.2	
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PROJECT NO: 1190-01-00
 COUNTY: WASHBURN
 HWY: U.S.H. 53
 SCALE, FEET 0 50 100 SHEET
 PLOT BY: SRP Consulting Group
 PLOT DATE: 12/5/2008
 PLOT SCALE: 100.0000 sf / IN.

5

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CTH T

CTH T intersects USH 53 in the community of Wascott. The west leg of the intersection is CTH T and the east is Red Lake road. The volumes on CTH T are approximately 570 AADT. Some of the constraints that were noted prior to the development of alternatives are a business in the NE quadrant, residential housing in the SE and NW quadrants, Bergen Creek to the north of the intersection as well as an extensive wetland around the entire intersection.

The volumes on the side roads at the CTH T intersection do not necessarily indicate that the potential for increased crashes would occur at this intersection. Located 1.3 miles to the south of this intersection is Northwood School whose only access is an at-grade intersection onto USH 53. With the higher risk for crashes at this private access solutions for the closure of this access were considered. If the private access were converted to an interchange it would only serve the school and eliminate the possibility of another interchange within three miles north or south. Keeping the system in perspective an alternate access from the back of the school could be developed to access an existing town road that intersects with CTH T. This would allow for the development of an interchange at CTH T, which would provide access to a larger network of local roads. An interchange at this location would then reduce the risk for crashes at this intersection and the school's access, as well as maintain the mobility of the USH 53 corridor as traffic volumes increase, thus meeting the purpose of this project.

Two locations for the interchange were considered. These locations were at the existing intersection and south approximately 900 feet. At each location a standard diamond configuration was evaluated. The first three alternatives described below were presented to the local officials and the public. After review of the comments a fourth alternative was developed and considered.

Alternate 1:

Alternative 1 consists of placing a standard diamond interchange at the existing at-grade location. A bridge over the Wild Rivers trail would also be required to accommodate the closure on Town Hall Rd. to access the community on the east side of USH 53. Located with 1 ½ miles north and south along USH 53 of this proposed interchange are one town road, three private accesses and one school access which would be closed. Reconfiguration of the intersection of Antler Inn Rd, E Red Lake Dr and CTH T on the west side of USH 53 would be required along with some work to E Red Lake Dr's new crossing of the Wild Rivers Trail.

This alternative would have impacts to Bergen Creek and the flood plain area surrounding the creek as well as some wetlands in the SW quadrant. The business in the NW quadrant would need relocation as well as 3- 4 residences.

Alternative 2:

Alternative two places a standard diamond interchange approx. 900 feet south of the existing at-grade intersection. The alignment of CTH T and E Red Lake Dr. both swing south of the existing intersection and then continue east and west. When these roadways are straightened they intersect USH 53 approx. 900 feet south of the existing intersection. The same closures of access point along US 53 are required as in Alternative 1. A overpass of the Wild Rivers Trail is also required to accommodate the smooth flow of traffic as well as provide the ¼ mile spacing from the ramp terminals to provide access to the community on the east side of USH 53. Some minor modifications on the town roadways on the west side of USH 53 would be required to facilitate the change in the alignment of CTH T.

This alternative has minimal impacts to the Bergen Creek and its associated flood plane. Additional impacts to the wetlands on the south side of the interchange do occur as well as the reroute of CTH T impacts an area of open water. One residence would require relocation.

Alternative 3:

Alternative three consist of a standard diamond interchange approx. 800 feet south of the existing intersection. This would be very similar to alternative 2 with the exception that CTH T would be moved to the north to avoid the open water and minimize the impact to the wetland surrounding it. An overpass of the Wild Rivers Trail would also be included in this alternative to provide the required spacing for access to the community and the realignment of E Red Lake Dr. Minor alterations to the town road system on the west side of USH 53 would be required to connect to the realigned CTH T. The same closures of access point along US 53 are required as in Alternative 1 & 2.

Impact to Bergen Creek and its surrounding flood plane are minimal and impacts to the wetlands on the south side of the interchange are reduced from those in Alternative 2. One residence would require relocation.

Alternative 4:

Alternative four is a ramp variation of Alternative 3 resulting from comments received at the local officials and public meetings. The ramps on the west side of USH 53 are the same as a diamond configuration and the ramps on the east side are folded to the south. This alternative would have a service road directly across from the ramp terminals that would provide access to the community as well at connection to E Red Lake Rd. The same closures of access point along US 53 are required as in Alternative 1, 2 & 3. Minor alterations to the town road system on the west side of USH 53 would be required to connect to the realigned CTH T.

Impact to Bergen Creek and its surrounding flood plane are minimal and impacts to the wetlands on the southwest side of the interchange are reduced from those in Alternative 2. Impact to the wetland area in the SE quadrant, but would not physically impact the residence on the NE quadrant. One residence may require relocation if alternate access is unattainable.

Agency and public comment:

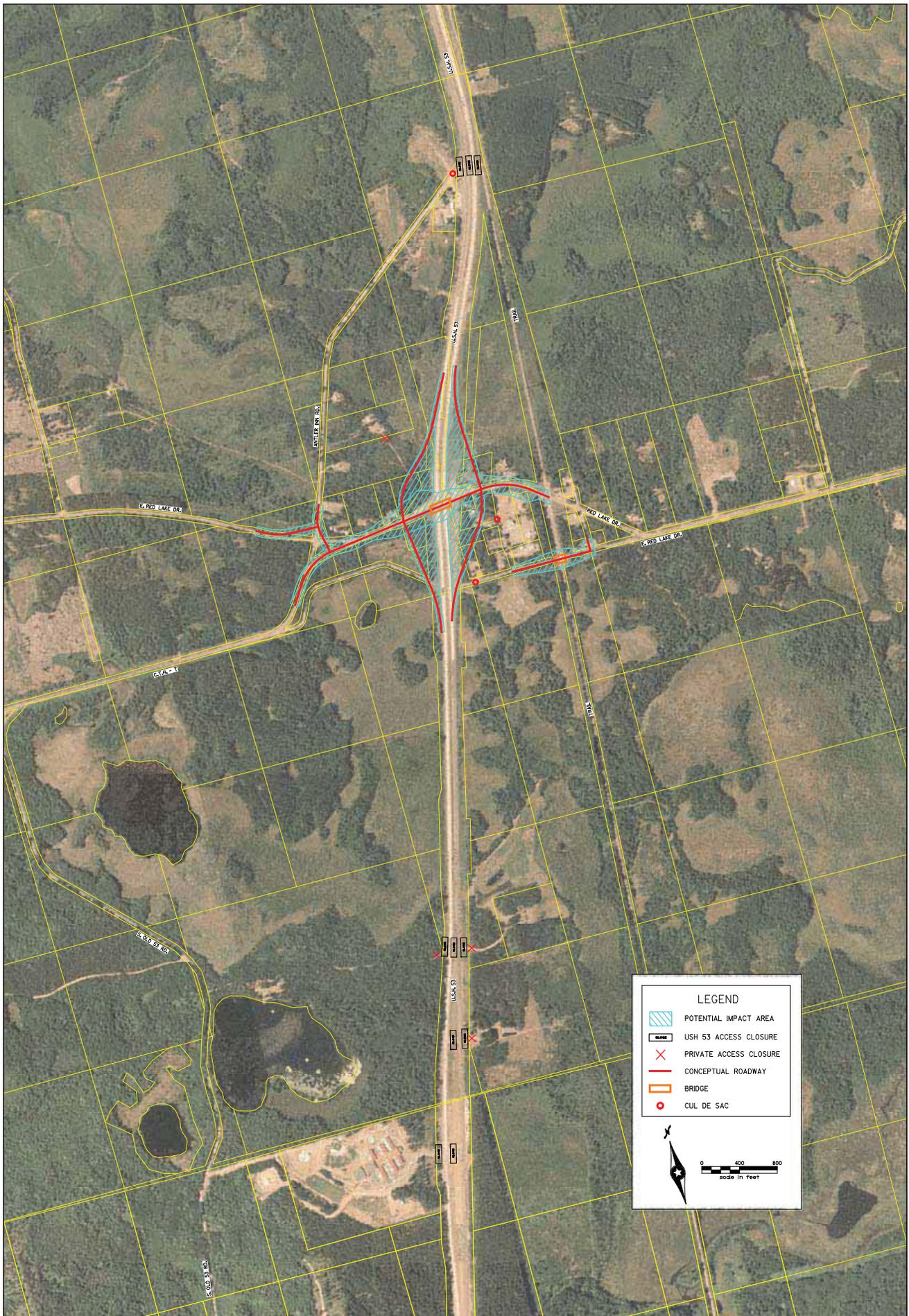
Alternatives 1 and 2 were discarded prior to the DNR providing comment on the alternatives. The DNR comments on alternative 3 and 4 were that in both alternatives the SB exit ramp might impact the riparian wetland around Bergen Creek and portions of the mapped floodplain of Bergen Creek. They also commented that the wetland south of the interchange on both sides of USH 53 appears to be a higher quality wet meadow that is currently bisected by USH 53 and that alternate 4 would have a greater impact on these wetlands. The DNR also commented on the Wild rivers State Trail. They request that any crossing of the trail be a grade separation that spans the entire trail and railroad R/W. Deam's Rockcross and Prairie Sagebrush have been survey along portions of the Wild Rivers State Trail.

The comments from the public officials were that all three alternatives that were presented did not provide easy access to the Town Hall and garage. These were the comments that lead us to develop a forth alternative that the DNR and ourselves field reviewed. The local officials ranked alternate 3 as their first choice.

The public comments received were to locate the interchange somewhere other than at the existing intersection, and how any of the improvements impact the value of the property. Alternative 1 was ranked the highest with Alternative 3 second.

Conclusion

After reviewing the comments received as well as the alternative evaluation matrix, it was determined that the impacts to for each of the four alternatives were greater than the advantages gained with a full interchange. Therefore an overpass with right in/right out jug handles will be the preferred alternative for this location. This configuration will provide the increased safety and not impede mobility. This alternative does not require the closure of the other access along USH 53 that would be affected with a full interchange design. A preliminary plan was developed for the interchange and reviewed by PDS. Following the review the design was modification were made to address the comments received.



04/17/08



Alternative 1 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond



04/17/08



Alternative 2 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond with Realigned CTH T (Option 1)

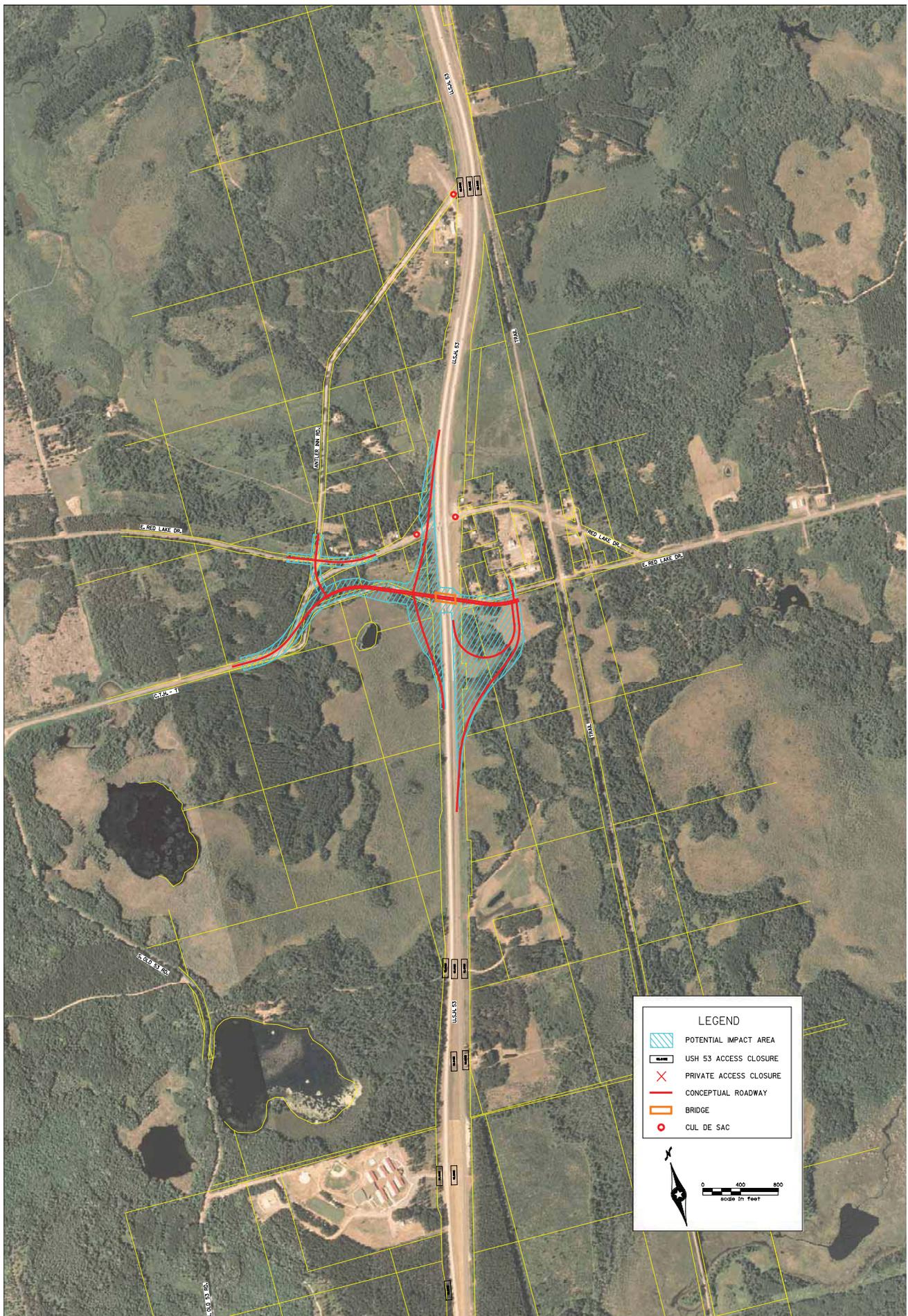


04/17/08



Alternative 3 - US 53 Corridor Preservation, Minong Area

CTH T Standard Diamond with Realigned CTH T (Option 2)



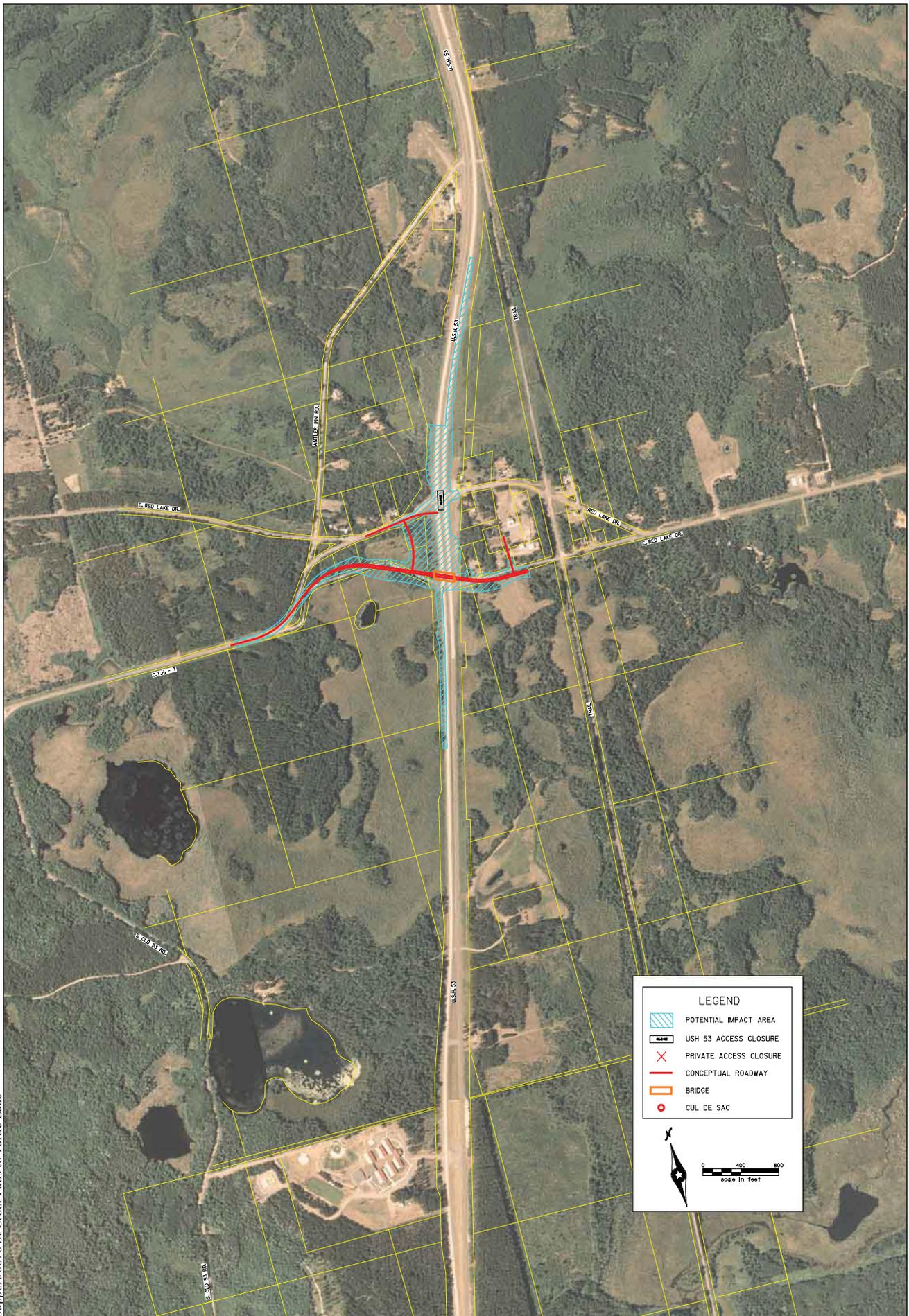
2/12/09



Alternative 4 - US 53 Corridor Preservation, Minong Area

CTH T Folded Diamond with Realigned CTH T (Option 2)

Support/6676 St. Croix Falls to Turtle Lake



LEGEND

- POTENTIAL IMPACT AREA
- USH 53 ACCESS CLOSURE
- PRIVATE ACCESS CLOSURE
- CONCEPTUAL ROADWAY
- BRIDGE
- CUL DE SAC

0 400 800
Scale in Feet

06/18/09



Alternative 5
CTH T Jug Handle

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PRELIMINARY DESIGN

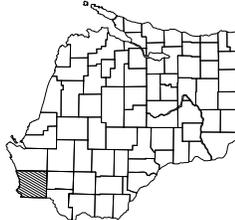
U.S.H. 53

CTH-T OVERPASS - ALTERNATIVE 5 DOUGLAS COUNTY

ORDER OF SHEETS

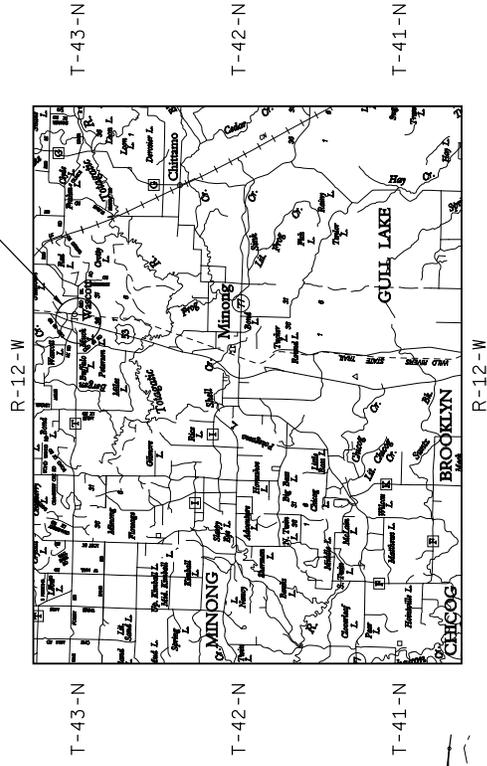
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Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right-of-Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plans
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

STATE PROJECT	FEDERAL PROJECT
	PROJECT
	CONTRACT



STATE PROJECT NUMBER
1190-01-00

PROJECT LOCATION



DESIGN DESIGNATION

A.A.D.T. (200X)	=
A.A.D.T. (20XX)	=
D.R.V.	=
D.O.	=
T.	=
DESIGN SPEED	=
ESALS	=

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT	
(BOX OR PIPES)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
MARSH OR ROCK PROFILE	
(TO be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

SCALE 0 4 M.

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS) - Washburn County. Elevations are based on NGVD 29.

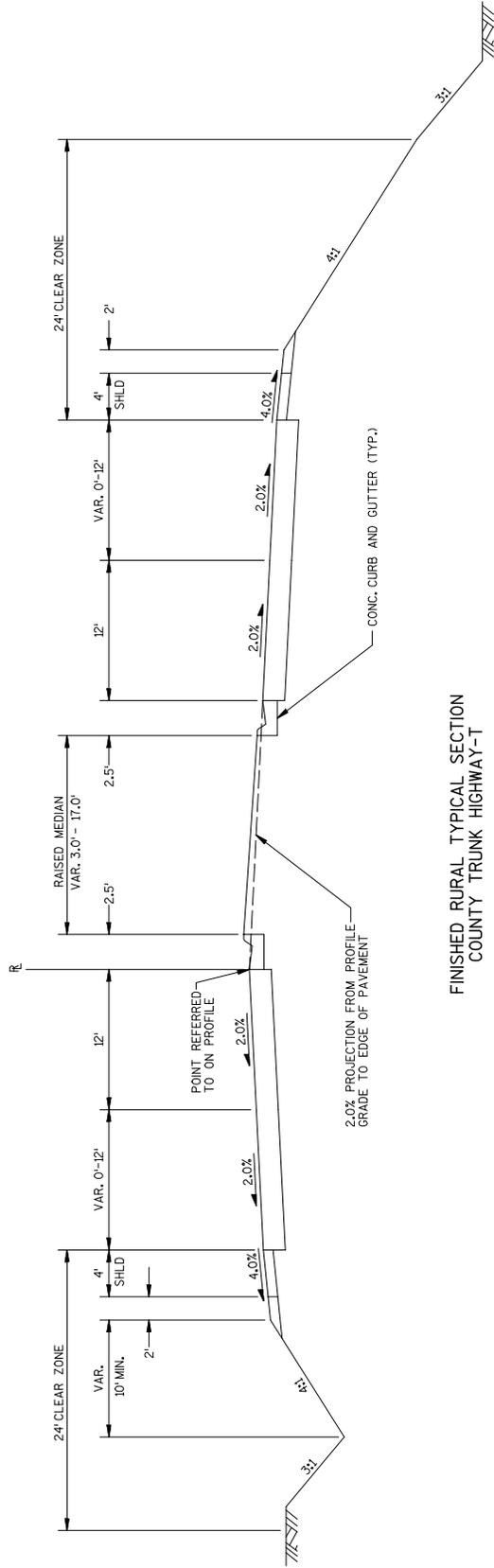
ORIGINAL PLANS PREPARED BY

DATE: _____ (signature)

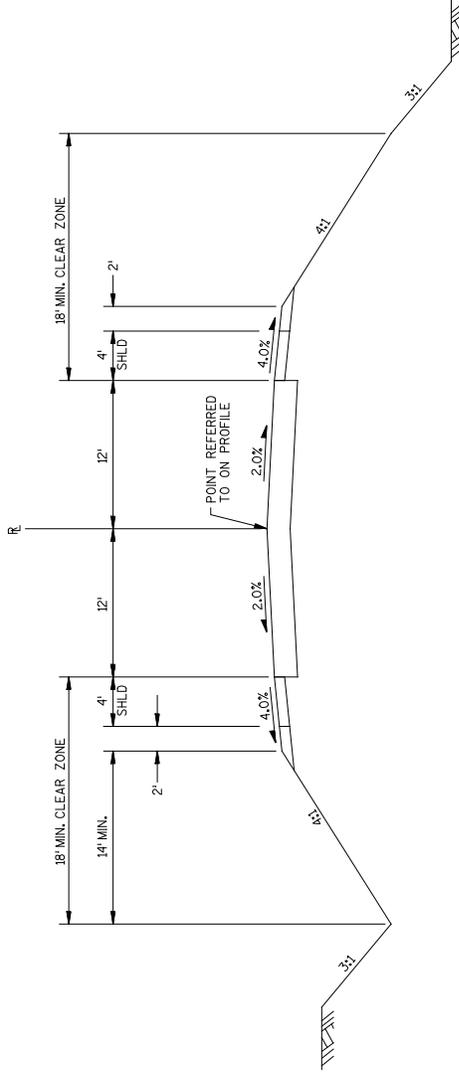
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY: _____
 Designer: _____
 Project Manager: _____
 Regional Examiner: _____
 Regional Supervisor: _____
 C.O. Examiner: _____

APPROVED FOR THE DEPARTMENT: _____
 DATE: _____ (signature)



FINISHED RURAL TYPICAL SECTION
 COUNTY TRUNK HIGHWAY-T
 DESIGN SPEED = 45



FINISHED RURAL TYPICAL SECTION
 S.B. U.S.H. 53 EXIT/ENT. ROADWAY
 DESIGN SPEED = 30

PROJECT NO: 1190-01-00

HWY: U.S.H. 53

COUNTY: DOUGLAS

TYPICAL SECTIONS

SHEET

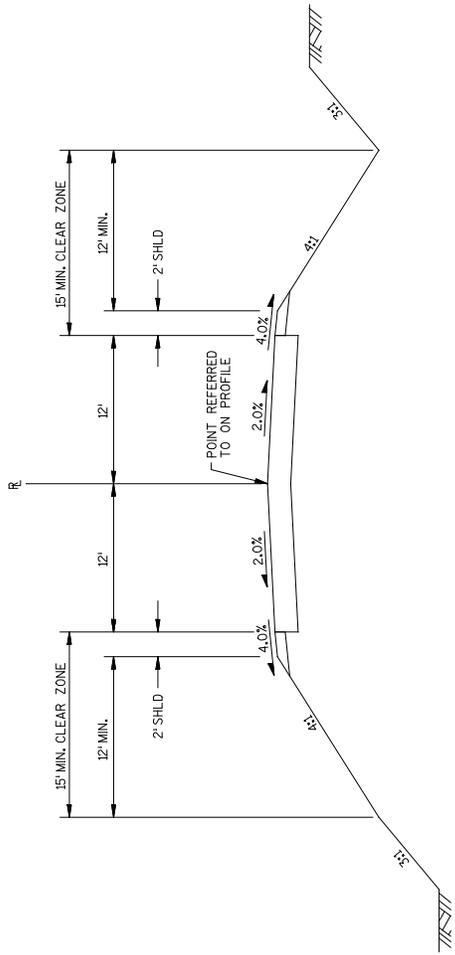
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PLOT DATE : 5/28/2009

PLOT BY : SRF Consulting Group

PLOT SCALE : 10,000 SF / IN.

E



FINISHED RURAL TYPICAL SECTION
 LOCAL ROADS
 DESIGN SPEED = 30

PROJECT NO: 1190-01-00

HWY: U.S.H. 53

COUNTY: DOUGLAS

PLOT DATE : 5/28/2009

TYPICAL SECTIONS

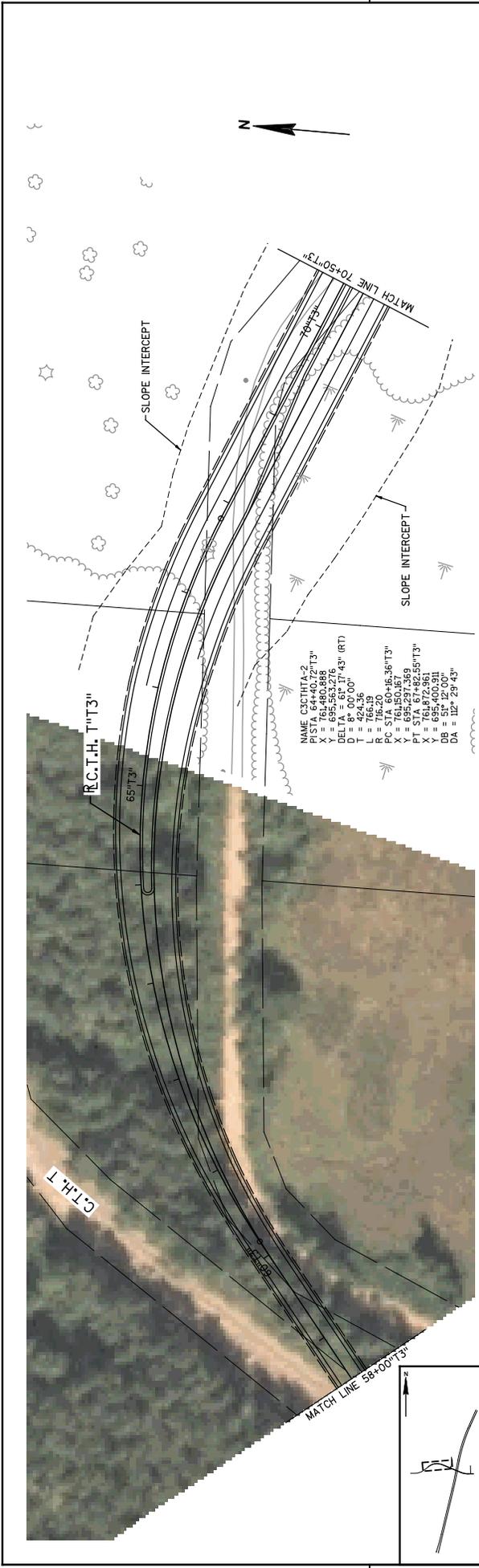
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PLOT SCALE : 10,000 SF / IN.

SHEET

E

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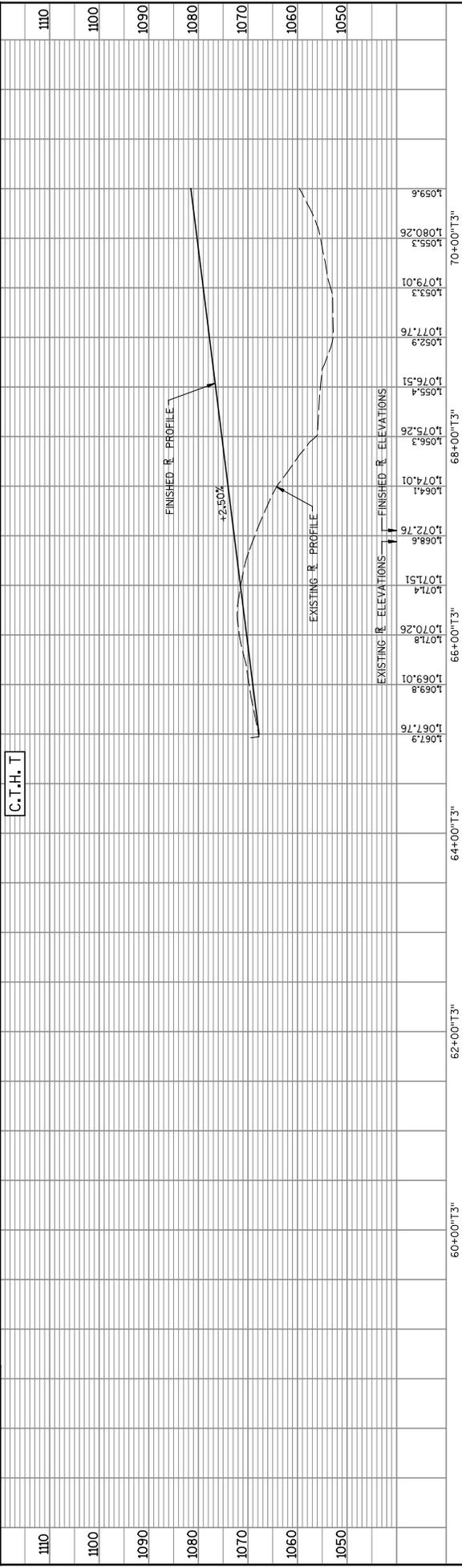


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 Y = 695237.569
 DELTA = 63° 17' 43" (RT)
 D = 8° 00' 00"
 L = 766.196
 R = 716.220
 PC STA 60+46.36'±T3"
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 DA = 112° 29' 43"

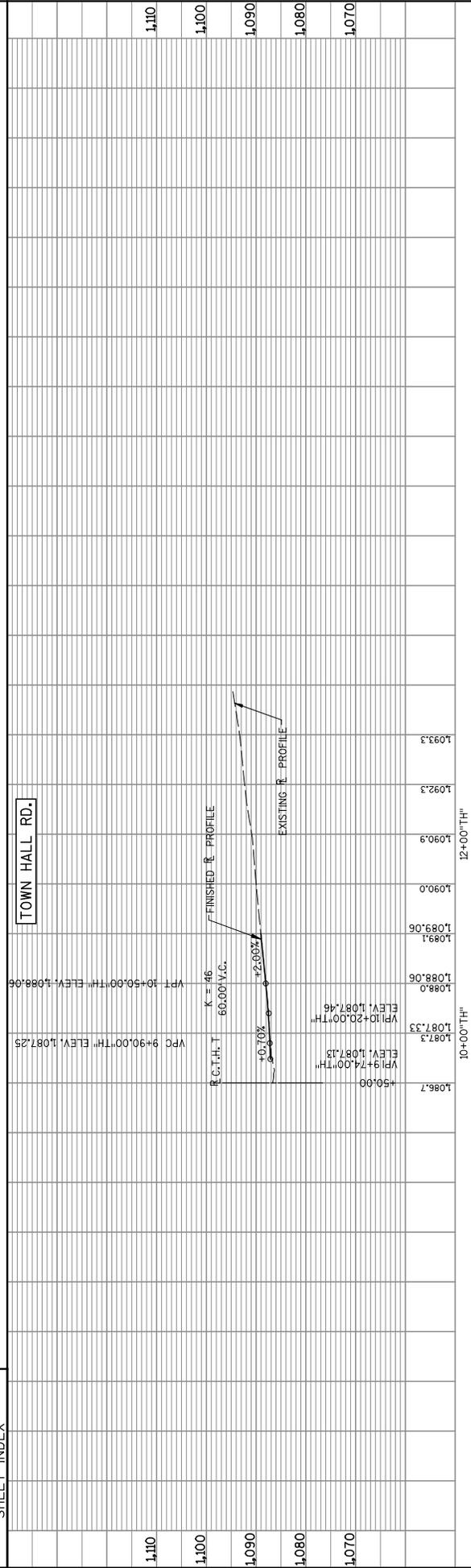
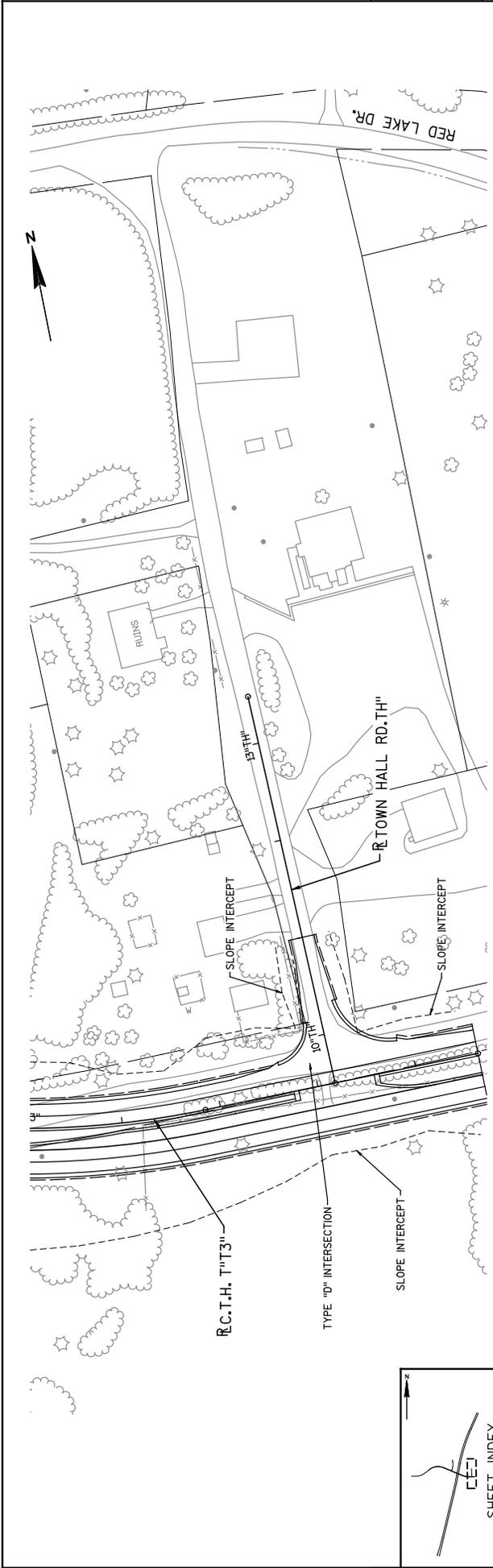


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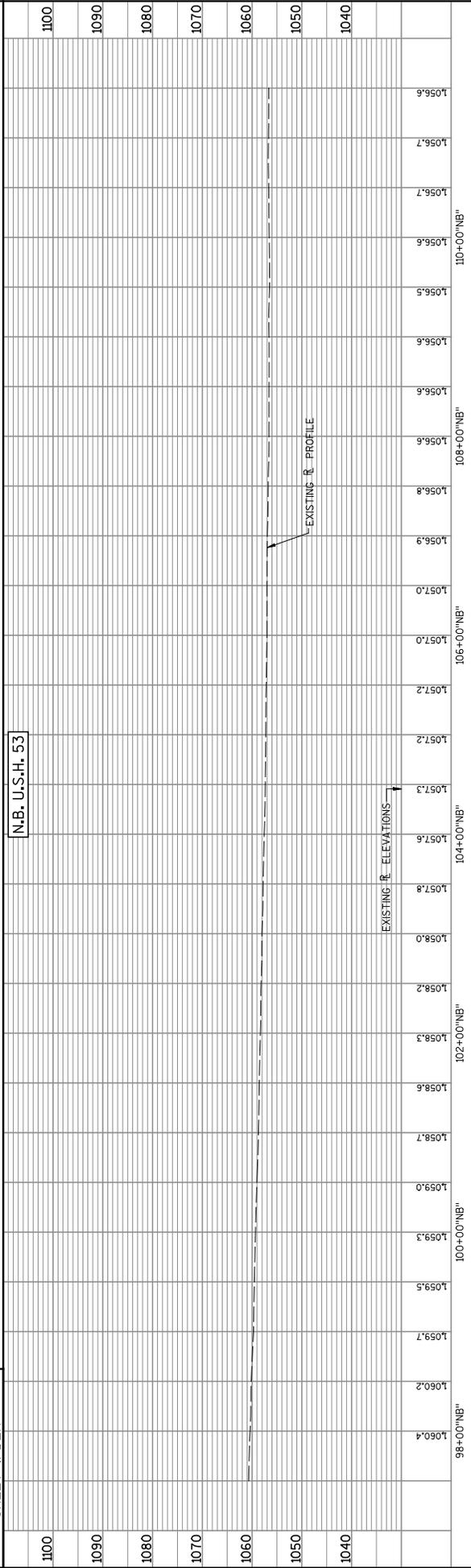
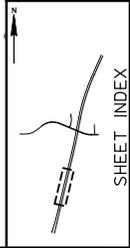
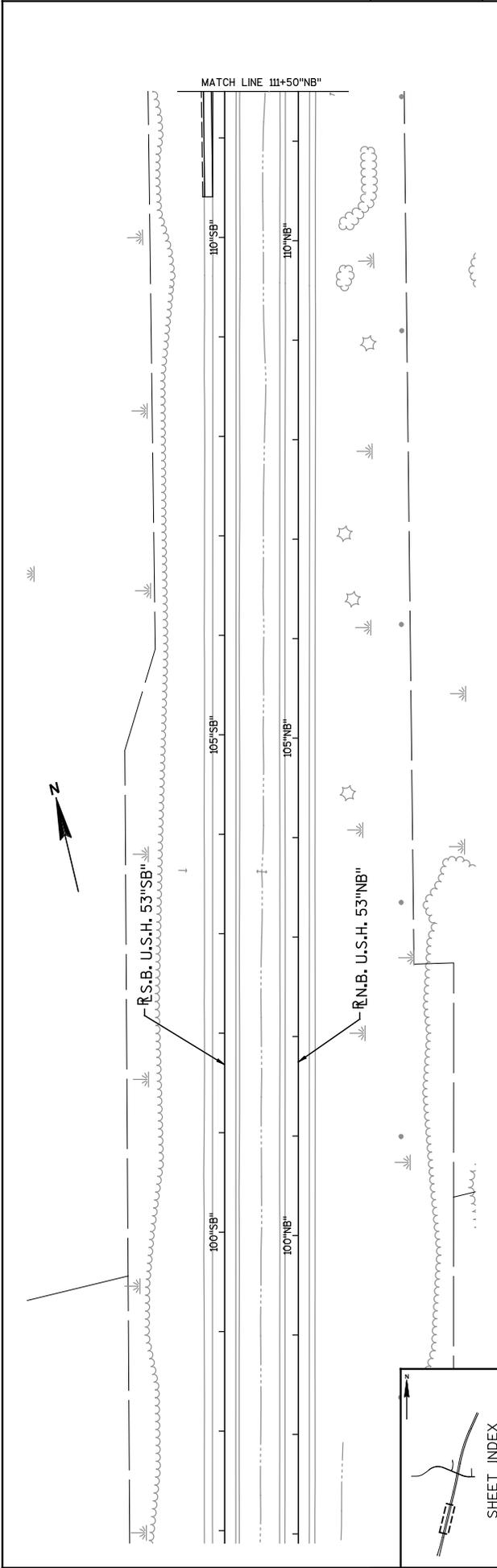
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1085.26	66+00'±T3"	0	0.0030517578125	0	0.0030517578125
1086.51	66+00'±T3"	0	0.00152587890625	0	0.00152587890625
1087.76	66+00'±T3"	0	0.000762939453125	0	0.000762939453125
1089.01	66+00'±T3"	0	0.0003814697265625	0	0.0003814697265625
1090.26	66+00'±T3"	0	0.00019073486328125	0	0.00019073486328125
1091.51	66+00'±T3"	0	0.000095367431640625	0	0.000095367431640625
1092.76	66+00'±T3"	0	0.0000476837158203125	0	0.0000476837158203125
1094	66+00'±T3"	0	0.00002384185791015625	0	0.00002384185791015625
1095.26	66+00'±T3"	0	0.000011920928955078125	0	0.000011920928955078125
1096.51	66+00'±T3"	0	0.0000596046447775390625	0	0.0000596046447775390625
1097.76	66+00'±T3"	0	0.00002980232238876953125	0	0.00002980232238876953125
1099.01	66+00'±T3"	0	0.0000149011611943928125	0	0.0000149011611943928125
1100.26	66+00'±T3"	0	0.00000745058059719640625	0	0.00000745058059719640625
1101.51	66+00'±T3"	0	0.000003725290298598203125	0	0.000003725290298598203125
1102.76	66+00'±T3"	0	0.0000018626451492991015625	0	0.0000018626451492991015625
1104	66+00'±T3"	0	0.00000093132257464955078125	0	0.00000093132257464955078125
1105.26	66+00'±T3"	0	0.0000004656612873247775390625	0	0.0000004656612873247775390625
1106.51	66+00'±T3"	0	0.00000023283064366238876953125	0	0.00000023283064366238876953125
1107.76	66+00'±T3"	0	0.0000001164153218311943928125	0	0.0000001164153218311943928125
1109.01	66+00'±T3"	0	0.0000005820766091559719640625	0	0.0000005820766091559719640625
1110.26	66+00'±T3"	0	0.0000002910383045798598203125	0	0.0000002910383045798598203125
1111.51	66+00'±T3"	0	0.00000014551915228992991015625	0	0.00000014551915228992991015625
1112.76	66+00'±T3"	0	0.000000072759576144964955078125	0	0.000000072759576144964955078125
1114	66+00'±T3"	0	0.00000003637978807248247775390625	0	0.00000003637978807248247775390625
1115.26	66+00'±T3"	0	0.00000001818989403624119640625	0	0.00000001818989403624119640625
1116.51	66+00'±T3"	0	0.0000000090949470181208203125	0	0.0000000090949470181208203125
1117.76	66+00'±T3"	0	0.00000000454747350906041015625	0	0.00000000454747350906041015625
1119.01	66+00'±T3"	0	0.000000002273736754530205078125	0	0.000000002273736754530205078125
1120.26	66+00'±T3"	0	0.0000000011368683772651025390625	0	0.0000000011368683772651025390625
1121.51	66+00'±T3"	0	0.000000005684341886325126953125	0	0.000000005684341886325126953125
1122.76	66+00'±T3"	0	0.000000002842170943162563476953125	0	0.000000002842170943162563476953125
1124	66+00'±T3"	0	0.000000001421085471581281738476953125	0	0.000000001421085471581281738476953125
1125.26	66+00'±T3"	0	0.000000000710542735790640869238476953125	0	0.000000000710542735790640869238476953125
1126.51	66+00'±T3"	0	0.000000000355271367895320434619238476953125	0	0.000000000355271367895320434619238476953125
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1136.51	66+00'±T3"	0	0.00000000001387778780834110732419238476953125	0	0.00000000001387778780834110732419238476953125
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1144	66+00'±T3"	0	0.00000000002168404345052204329619238476953125	0	0.00000000002168404345052204329619238476953125
1145.26	66+00'±T3"	0	0.00000000001084202172526102164819238476953125	0	0.00000000001084202172526102164819238476953125
1146.51	66+00'±T3"	0	0.0000000000542101086261305102419238476953125	0	0.0000000000542101086261305102419238476953125
1147.76	66+00'±T3"	0	0.000000000027105054313065251219238476953125	0	0.000000000027105054313065251219238476953125
1149.01	66+00'±T3"	0	0.00000000001355252715652612619238476953125	0	0.00000000001355252715652612619238476953125
1150.26	66+00'±T3"	0	0.000000000067762635782763130619238476953125	0	0.000000000067762635782763130619238476953125
1151.51	66+00'±T3"	0	0.00000000003388131789138151530619238476953125	0	0.00000000003388131789138151530619238476953125
1152.76	66+00'±T3"	0	0.00000000001694065894590757630619238476953125	0	0.00000000001694065894590757630619238476953125
1154	66+00'±T3"	0	0.00000000008470329472953788130619238476953125	0	0.00000000008470329472953788130619238476953125
1155.26	66+00'±T3"	0	0.000000000042351647364768940651530619238476953125	0	0.000000000042351647364768940651530619238476953125
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1160.26	66+00'±T3"	0	0.00000000002646977960280588130619238476953125	0	0.00000000002646977960280588130619238476953125
1161.51	66+00'±T3"	0	0.000000000013234889801402940651530619238476953125	0	0.000000000013234889801402940651530619238476953125
1162.76	66+00'±T3"	0	0.0000000000661744490070147032619238476953125	0	0.0000000000661744490070147032619238476953125
1164	66+00'±T3"	0	0.000000000033087224503507351530619238476953125	0	0.000000000033087224503507351530619238476953125
1165.26	66+00'±T3"	0	0.0000000000165436122517536768130619238476953125	0	0.0000000000165436122517536768130619238476953125
1166.51	66+00'±T3"	0	0.000000000082718061258783840651530619238476953125	0	0.000000000082718061258783840651530619238476953125
1167.76	66+00'±T3"	0	0.000000000041359030629391922351530619238476953125	0	0.000000000041359030629391922351530619238476953125
1169.01	66+00'±T3"	0	0.0000000000206795153146959612619238476953125	0	0.0000000000206795153146959612619238476953125
1170.26	66+00'±T3"	0	0.00000000001033975765734798130619238476953125	0	0.00000000001033975765734798130619238476953125
1171.51	66+00'±T3"	0	0.000000000051698788286723990651530619238476953125	0	0.000000000051698788286723990651530619238476953125
1172.76	66+00'±T3"	0	0.00000000002584939414336199530619238476953125	0	0.00000000002584939414336199530619238476953125
1174	66+00'±T3"	0	0.000000000012924697071680997651530619238476953125	0	0.000000000012924697071680997651530619238476953125
1175.26	66+00'±T3"	0	0.000000000064623485358404987651530619238476953125	0	0.000000000064623485358404987651530619238476953125
1176.51	66+00'±T3"	0	0.0000000000323117426792024938267651530619238476953125	0	0.0000000000323117426792024938267651530619238476953125
1177.76	66+00'±T3"	0	0.0000000000161558713396012469130619238476953125	0	0.0000000000161558713396012469130619238476953125
1179.01	66+00'±T3"	0	0.000000000080779356980012345469130619238476953125	0	0.000000000080779356980012345469130619238476953125
1180.26	66+00'±T3"	0	0.0000000000403896784900061727345469130619238476953125	0	0.0000000000403896784900061727345469130619238476953125



PROJECT NO: 1190-01-00	HWY: U.S.H. 53	COUNTY: DOUGLAS	PLAN AND PROFILE	SCALE, FEET $\frac{1}{80}$	SHEET
FILE NAME : h:\pro\jmdn\6190\h1-ma\p1\an\060121_pp-c3.dgn			PLOT DATE : 5/28/2009		
			PLOT BY : SRF Consulting Group		
			PLOT SCALE : 100.0000 sf / in.		

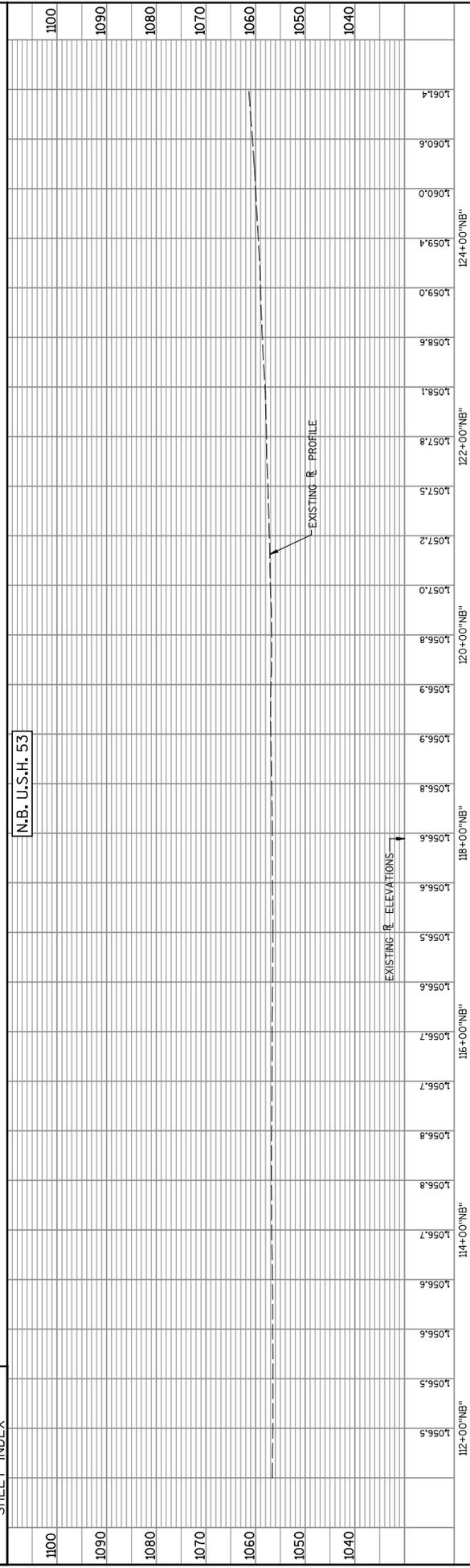
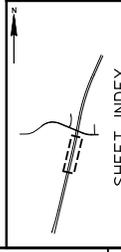
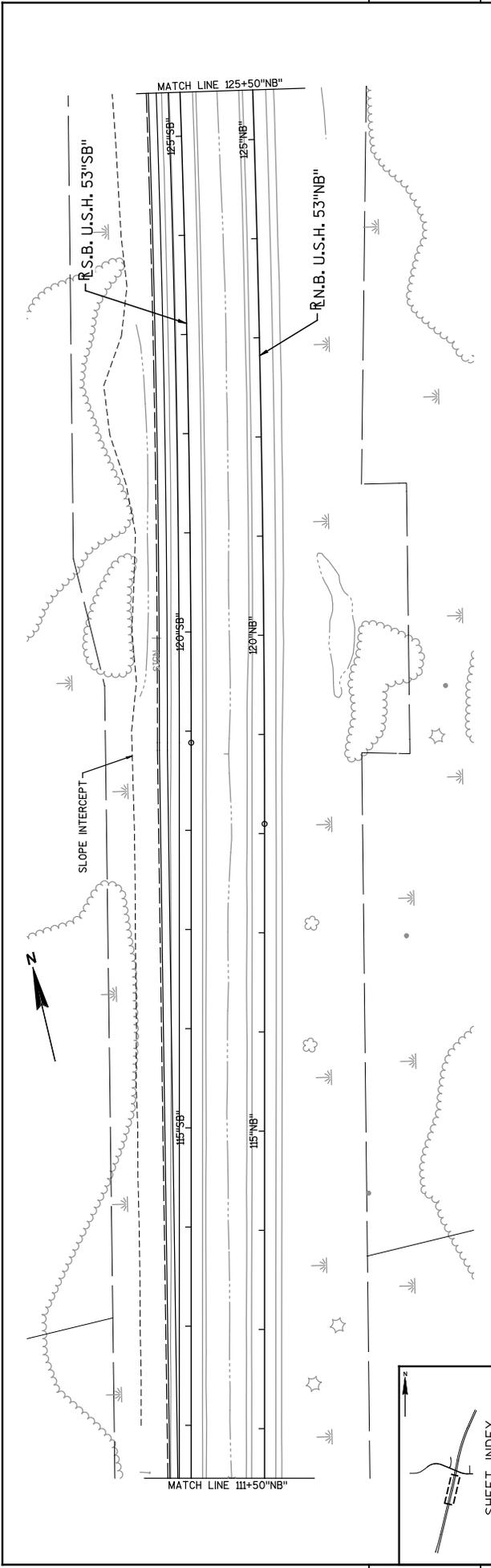
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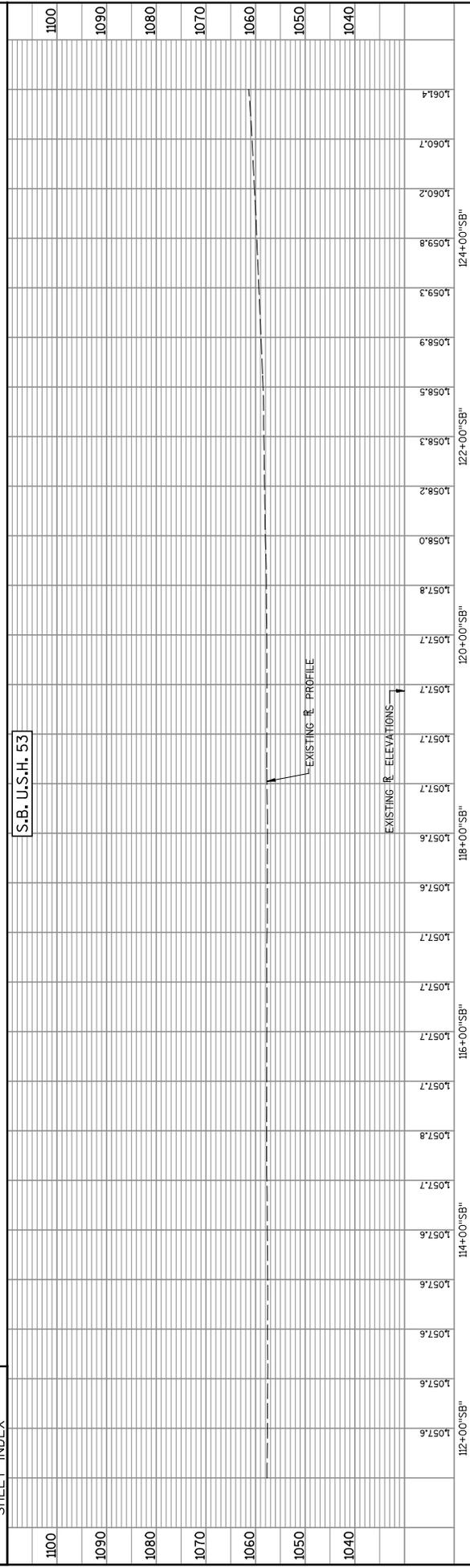
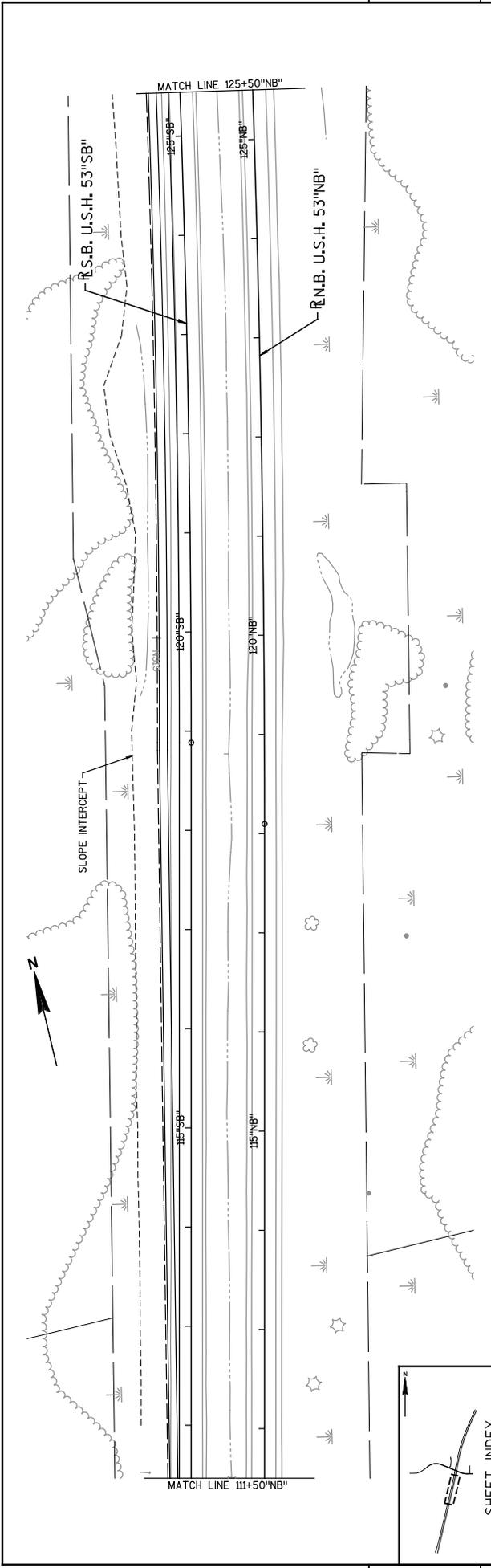
PROJECT NO: 1190-01-00
 COUNTY: DOUGLAS
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E

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 PLOT DATE : 5/28/2009
 PLOT BY : SRF Consulting Group
 PLOT SCALE : 100.0000 sf / IN.



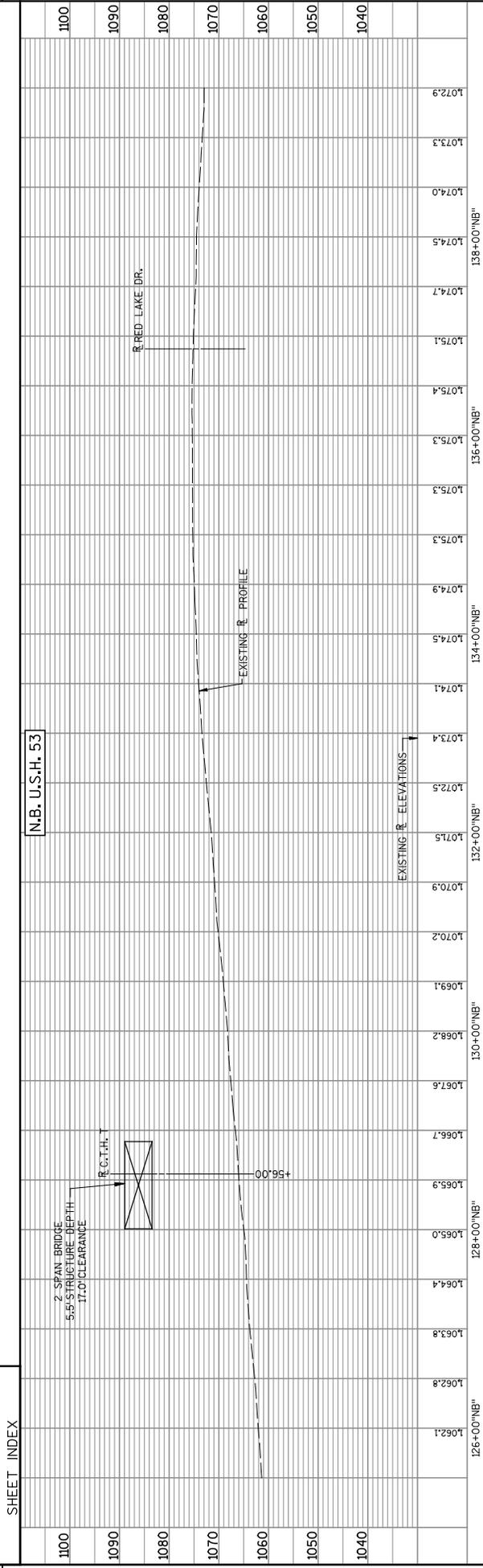
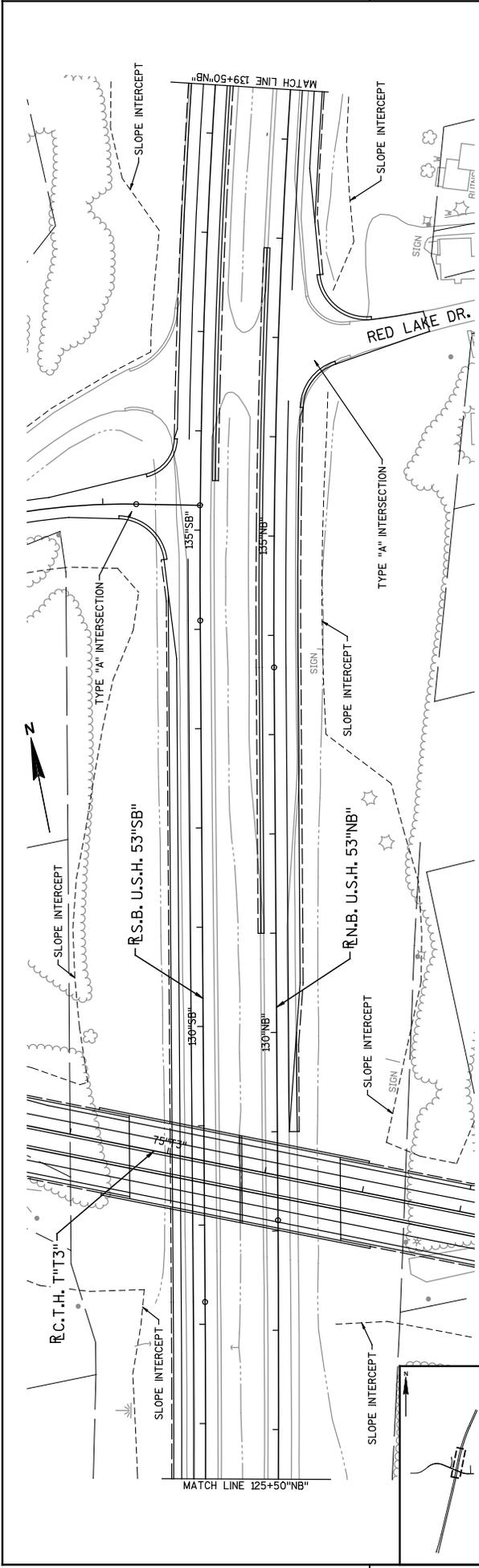
PROJECT NO: 1190-01-00	COUNTY: DOUGLAS	PLAN AND PROFILE	SCALE, FEET $\frac{1}{50}$ $\frac{1}{100}$	SHEET
HWY: U.S.H. 53				E

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 PLOT DATE : 5/28/2009
 PLOT BY : SRF Consulting Group
 PLOT SCALE : 100.0000 sf / in.



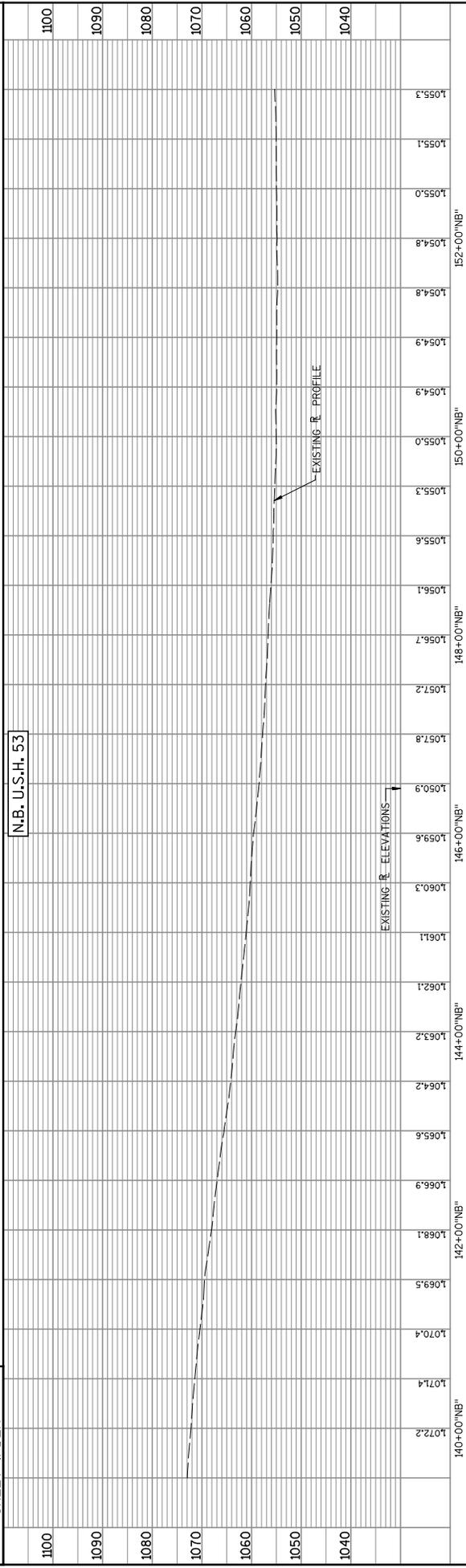
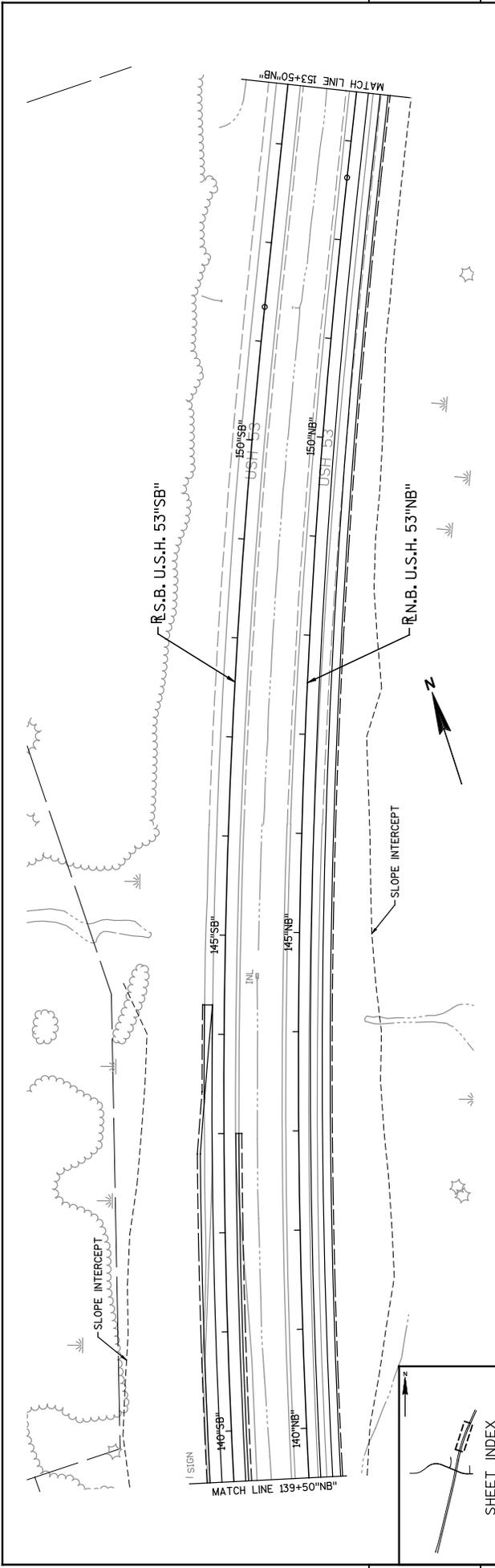
STATION	ELEVATION
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112+10	1057.6
112+20	1057.6
112+30	1057.6
112+40	1057.6
112+50	1057.6
112+60	1057.6
112+70	1057.6
112+80	1057.6
112+90	1057.6
113+00	1057.6
113+10	1057.6
113+20	1057.6
113+30	1057.6
113+40	1057.6
113+50	1057.6
113+60	1057.6
113+70	1057.6
113+80	1057.6
113+90	1057.6
114+00	1057.6
114+10	1057.6
114+20	1057.6
114+30	1057.6
114+40	1057.6
114+50	1057.6
114+60	1057.6
114+70	1057.6
114+80	1057.6
114+90	1057.6
115+00	1057.6
115+10	1057.6
115+20	1057.6
115+30	1057.6
115+40	1057.6
115+50	1057.6
115+60	1057.6
115+70	1057.6
115+80	1057.6
115+90	1057.6
116+00	1057.6
116+10	1057.6
116+20	1057.6
116+30	1057.6
116+40	1057.6
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117+30	1057.6
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117+90	1057.6
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121+30	1057.6
121+40	1057.6
121+50	1057.6
121+60	1057.6
121+70	1057.6
121+80	1057.6
121+90	1057.6
122+00	1058.0
122+10	1058.2
122+20	1058.3
122+30	1058.5
122+40	1058.9
122+50	1059.3
122+60	1059.8
122+70	1060.2
122+80	1060.7
122+90	1061.4

PROJECT NO: 1190-01-00
 COUNTY: DOUGLAS
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET E
 PLOT DATE : 5/28/2009
 PLOT BY : SRF Consulting Group
 PLOT SCALE : 100.0000 sf / IN.
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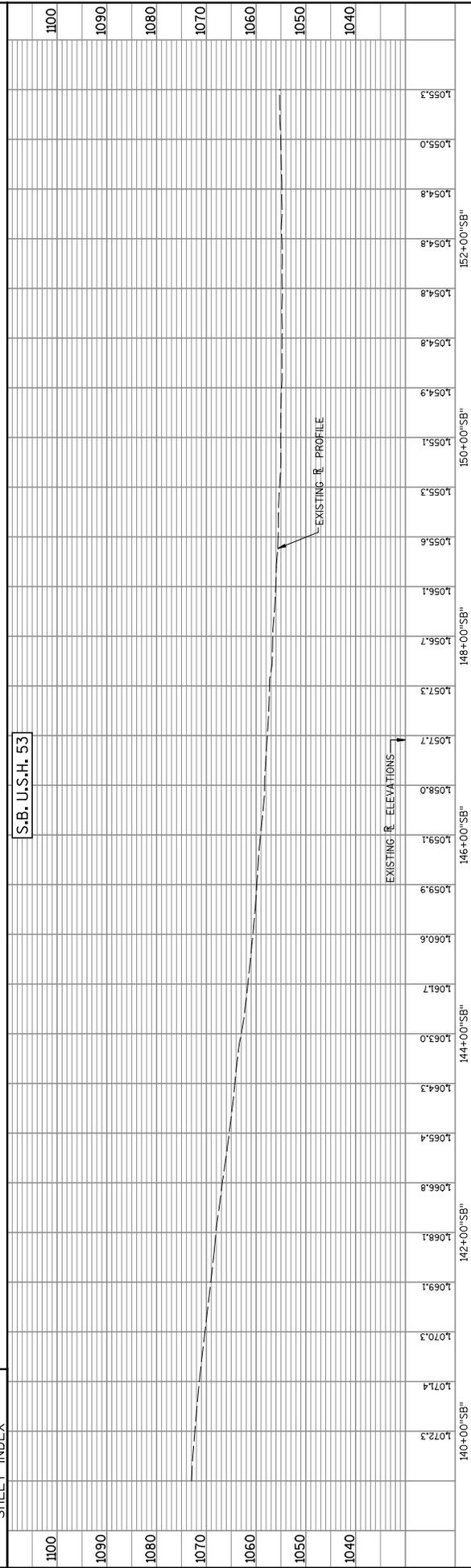
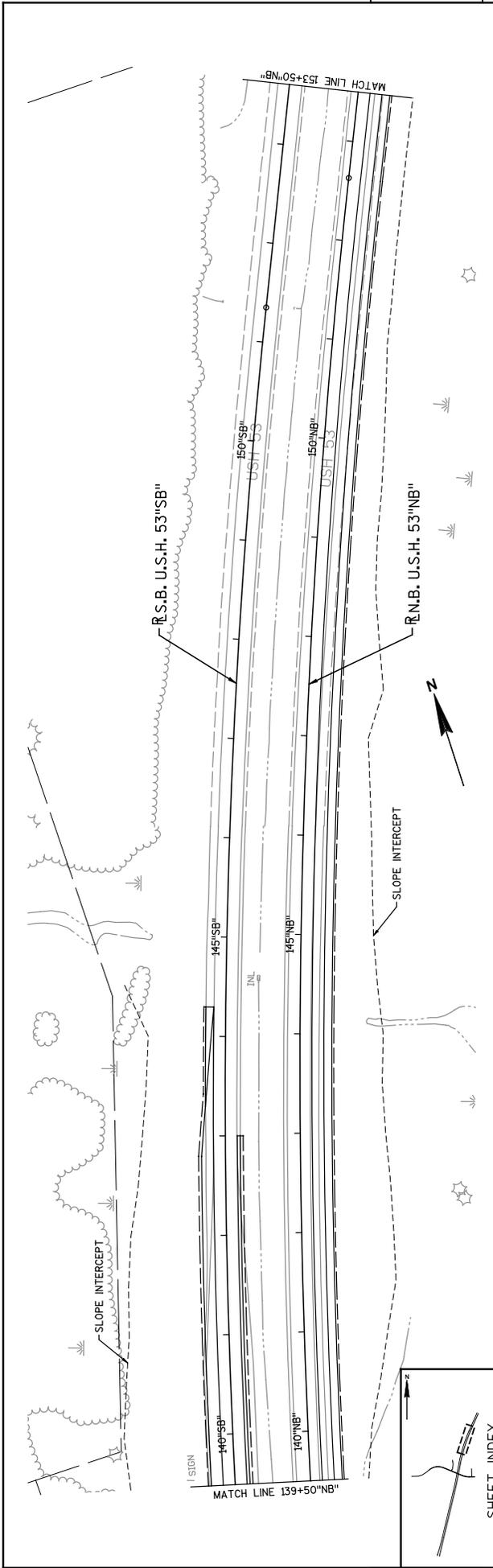


STATION	ELEVATION
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126+10	1062.8
126+20	1063.8
126+30	1064.4
126+40	1065.0
126+50	1065.9
126+60	1066.7
126+70	1067.6
126+80	1068.2
126+90	1069.1
127+00	1070.2
127+10	1070.9
127+20	1071.5
127+30	1072.5
127+40	1073.4
127+50	1074.1
127+60	1074.5
127+70	1074.9
127+80	1075.3
127+90	1075.3
128+00	1075.3
128+10	1075.3
128+20	1075.3
128+30	1075.3
128+40	1075.3
128+50	1075.3
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130+70	1075.3
130+80	1075.3
130+90	1075.3
131+00	1075.3
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135+90	1075.3
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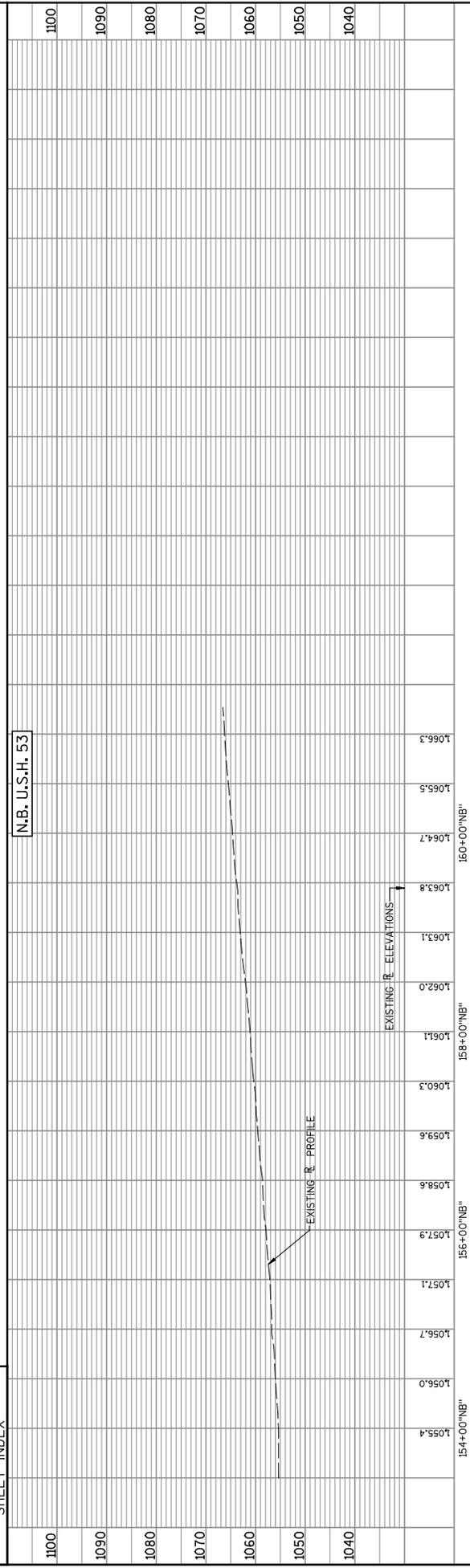
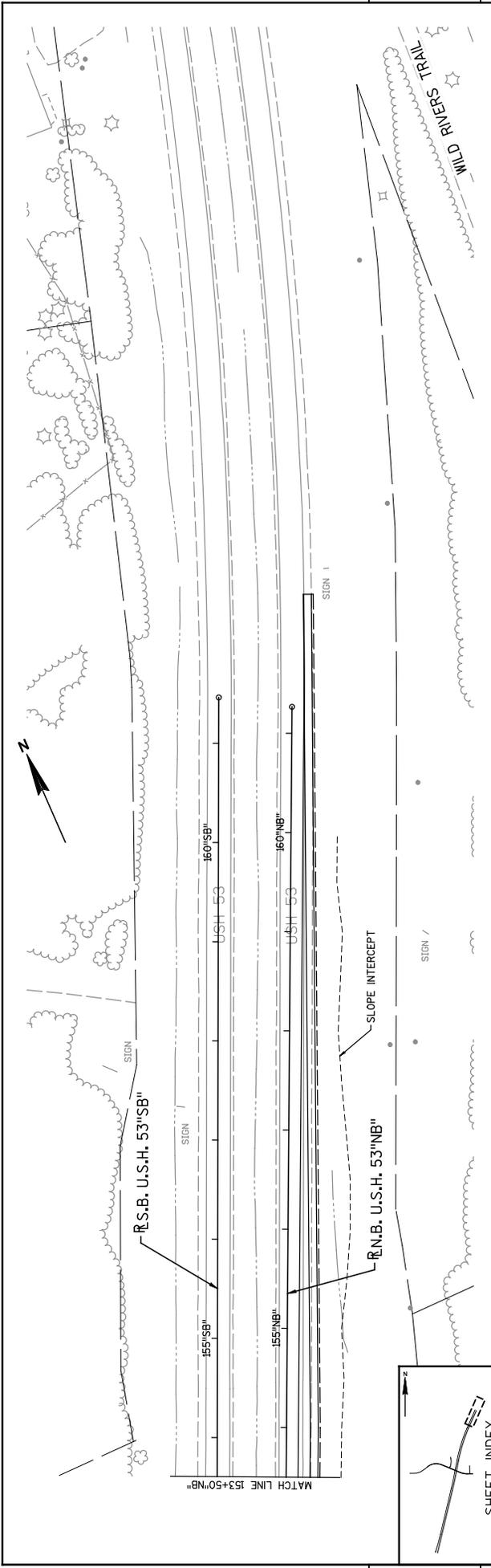
PROJECT NO: 1190-01-00
 COUNTY: DOUGLAS
 HWY: U.S.H. 53
 PLAN AND PROFILE
 SCALE, FEET 0 50 100
 SHEET
 PLOT DATE: 5/28/2009
 PLOT BY: SRF Consulting Group
 FILE NAME: h:\proj\msh\6190\h1-msh\plan\060114_pp-c3.dgn



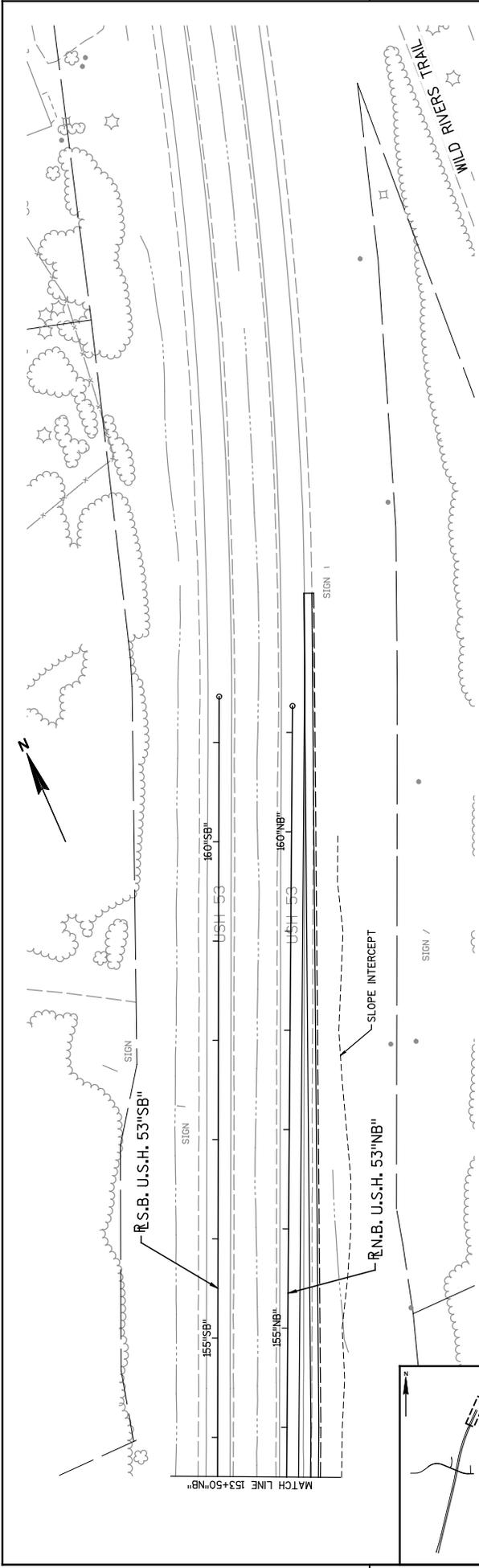
PROJECT NO: 1190-01-00	COUNTY: DOUGLAS	PLAN AND PROFILE	SHEET
HWY: U.S.H. 53			
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PROJECT NO: 1190-01-00	COUNTY: DOUGLAS	PLAN AND PROFILE	SHEET
HWY: U.S.H. 53			
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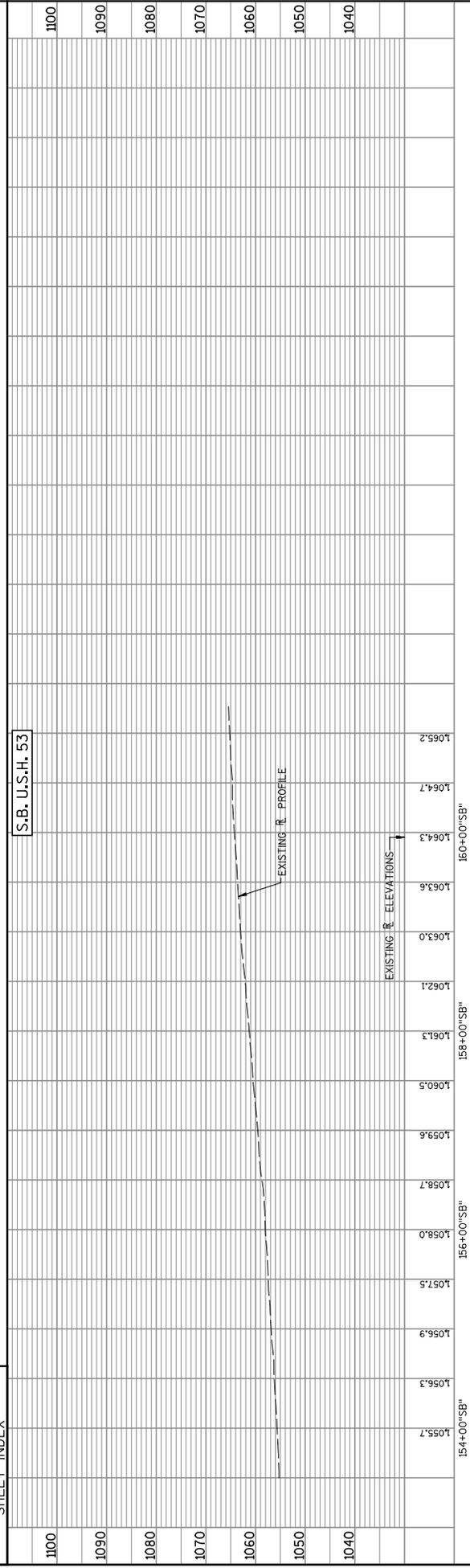


PROJECT NO: 1190-01-00	COUNTY: DOUGLAS	PLAN AND PROFILE	SCALE, FEET	SHEET
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PLOT BY: SRF Consulting Group				
PLOT DATE: 5/28/2009				
FILE NAME: h:\proj\midsr\6190\11-ml\plan\060116_pp-c3.dgn				



5

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PROJECT NO: 1190-01-00 COUNTY: DOUGLAS PLAN AND PROFILE SCALE, FEET 0 50 100 SHEET E

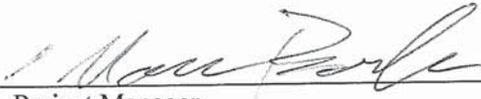
FILE NAME : h:\pro\jms\61190\11-m\plan\060119_pp-c3.dgn
 PLOT DATE : 5/28/2009
 PLOT BY : SRF Consulting Group
 PLOT SCALE : 100.0000 sf / in.

PROJECT ID: 1195-01-00
HIGHWAY: USH 53
LIMITS: Lampson to Gordon
CONCEPT: Corridor Preservation
COUNTY: Washburn and Douglas

This report is intended to provide documentation of the process used to select the preferred alternative, thereby reducing the need to duplicate these efforts when the design/construction phase begins.

By the signatures below SPO-Planning, PDS and the Regional Oversight Team of the NW Region as well as BPD are in agreement that the appropriate and a reasonable number of alternatives were evaluated resulting in the preferred alternative being selected. The layout and preliminary design of the preferred alternative is acceptable and meets all desirable design standards in place at this time unless noted in this report. Design standards will be review at the time of the design/construction phase to ensure current standards are conformed to.

SPO-Planning


Project Manager 10-7-09
Date

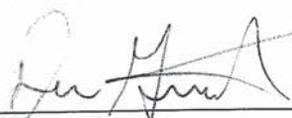
PDS


PDS Supervisor 10-15-09
Date

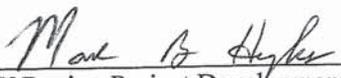
BPD

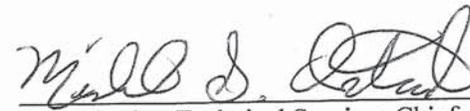

Regional Liaison 10/20/09
Date

Regional Oversight Team


NW Region Director 11-4-09
Date


NW Region Operations Manager 11-4-09
Date


NW Region Project Development Chief 11-3-09
Date


NW Region Technical Services Chief 11-3-09
Date


NW Region Operations Chief 11-3-09
Date


NW Region Planning Chief 10-27-09
Date

APPENDIX C

Alternatives Comparison Matrices

Matrix 1: County F

Matrix 2: WIS 77

Matrix 3: County T

MATRIX 1
ALTERNATIVE CONCEPT EVALUATION – US 53 at County F

US 53 at County F Alternatives	US 53 at County F Evaluation Criteria						
	Additional Local Road Construction	US 53 Access Changes ¹	Estimated Construction Cost	Relocations	ROW Impacts (acres)	Potential Wetland Impacts (acres)	Silver Lake Impacts (Potential for Encroachment)
Alternative 1 Standard Diamond with 600' spacing	2.0 miles	14 closures	\$10 - \$15 million	3 parcels	28.5	1.7	Yes
Alternative 2 Folded Diamond, Loop in NW and SE quadrant, 1300' spacing, County F <i>under</i> USH 53	1.4 miles	14 closures	\$10 - \$15 million	3 parcels	45.3	1.1	Yes
Sub-Alternative 2A Folded Diamond, Loop in NW and SE quadrant, 1300' spacing, County F <i>over</i> USH 53	1.4 miles	14 closures	\$20 - \$25 million	2 parcels	44.2	1.1	Yes
Alternative 3 Folded Diamond, Loop in SE quadrant, 1400' spacing	1.6 miles	14 closures	\$10 - \$15 million	1 parcel	44.1	1.2	Yes
Alternative 4 – Preferred “Jug Handle” configuration	0.7 mile ²	Remove crossovers and turn lanes at two locations	\$5 - \$8 million	2 parcels	20.9	1.0	Yes

¹ Does not include median closures

² Includes local road connections between US 53 and County F and reconstruction of Birchwood Drive

MATRIX 2
ALTERNATIVE CONCEPT EVALUATION – US 53 at WIS 77

US 53 at WIS 77 Alternatives	US 53 at WIS 77 Evaluation Criteria						
	Additional Local Road Construction	US 53 Access Closures ¹	Estimated Construction Cost	Relocations	ROW Impacts (Parcels Affected)	ROW Impacts (acres)	Potential Wetland Impacts (acres)
Alternative 1 Standard Diamond with 800' intersection spacing	1.0 mile	12	\$6 - \$10 million	5 parcels	28 parcels	27.4 acres	1.9 acres
Alternative 2 Standard Diamond with 800' intersection spacing, WIS 77 realigned to the south	0.5 mile	15	\$15 - \$20 million	2 parcels	30 parcels	58.5 acres	3.1 acres
Alternative 3 Split Diamond	2.8 miles	14	\$12 - \$17 million	3 parcels	46 parcels	44.4 acres	12.7 acres
Alternative 4 Tight Diamond with 400' intersection spacing	1.0 mile	12	\$16 - \$21 million	3 parcels	28 parcels	22.3 acres	1.8 acres
Alternative 6 Single Point Interchange	1.0 mile	10	\$18 - \$23 million	3 parcels	22 parcels	23.3 acres	1.8 acres
Alternative 5 – Preferred Folded Diamond, Loop in SW quadrant, 900' intersection spacing	1.4 mile	12	\$15 - \$20 million	3 parcels	22 parcels	46.4 acres	2.1 acres

¹ Does not include median closures

MATRIX 3
ALTERNATIVE CONCEPT EVALUATION – US 53 at County T

US 53 at County T Alternatives	US 53 at County T Evaluation Criteria						
	Additional Local Road Construction	US 53 Access Changes ¹	Estimated Construction Costs	Relocations	ROW Impacts (acres)	Potential Wetland Impacts (acres)	Potential Floodplain Impacts
Alternative 1 Standard Diamond with 900' spacing	0.4 mile	6 closures	\$5 - \$10 million	6 parcels	16.6 acres	10.5 acres	Yes
Alternative 2 Standard Diamond with 800' spacing, County T realigned (Option 1)	0.5 mile	7 closures	\$6 - \$12 million	2 parcels	21.3 acres	13.9 acres	Yes
Alternative 3 Standard Diamond with 700' spacing, County T realigned (Option 2)	0.3 mile	7 closures	\$5 - \$10 million	1 parcel	17.6 acres	8.0 acres	Yes
Alternative 4 Folded Diamond, County T realigned (Option 2)	0.3 mile	7 closures	\$5 - \$10 million	1 parcel	27.0 acres	12.5 acres	Yes
Alternative 5 – Preferred “Jug Handle” configuration	0.6 mile	Close median to allow right-in, right-out access	\$4 - \$7 million	None	10.2 acres	0.9 acres	No

¹ Does not include median closures

APPENDIX D

Preferred Alternatives

County F

Alternative 4: “Jug Handle” configuration

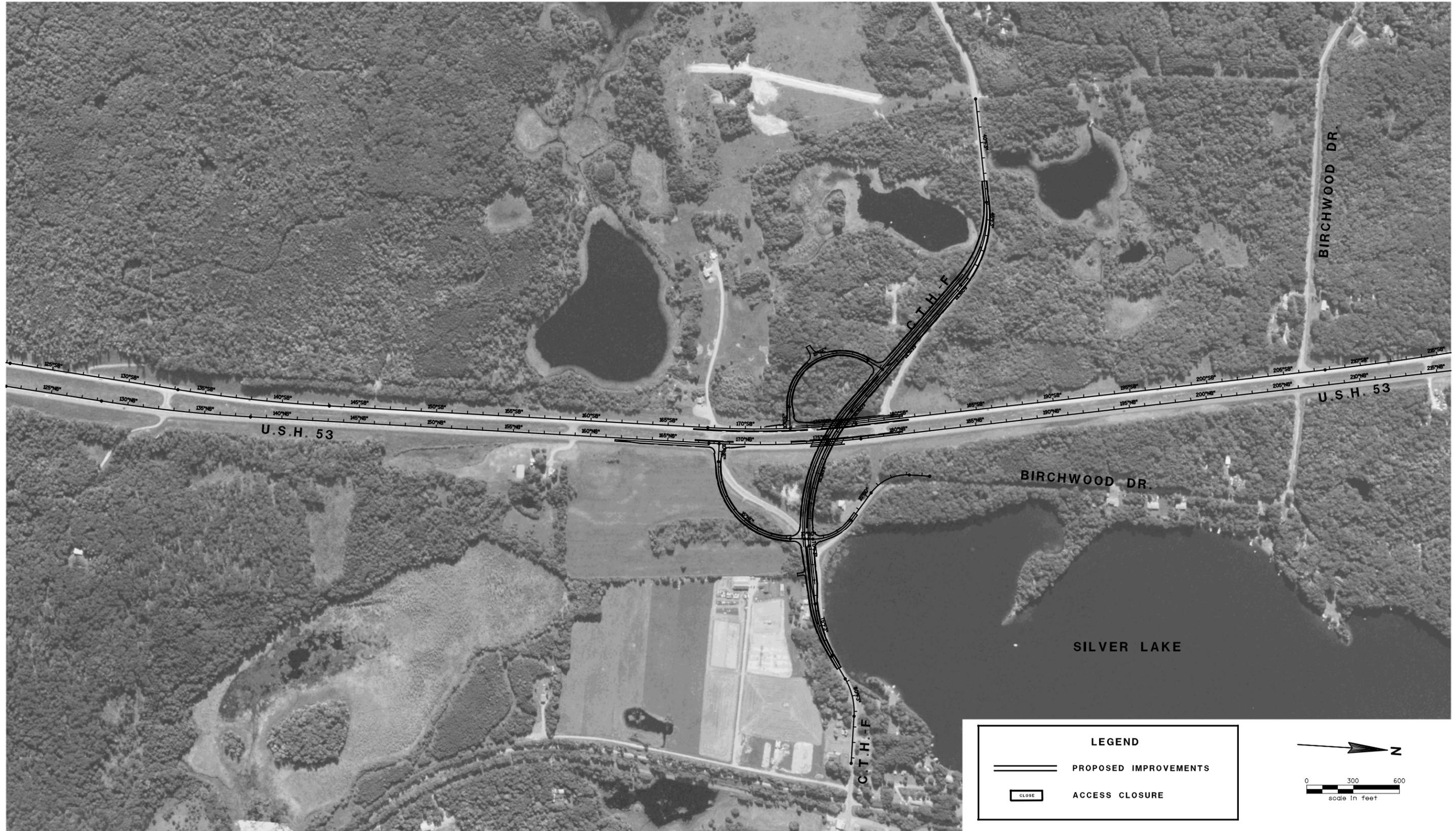
WIS 77

Alternative 5: Folded Diamond, Loop in SW Quadrant

County T

Alternative 5: “Jug Handle” configuration

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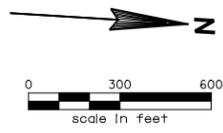


US 53 at County F - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
4/17/2013

Figure 1

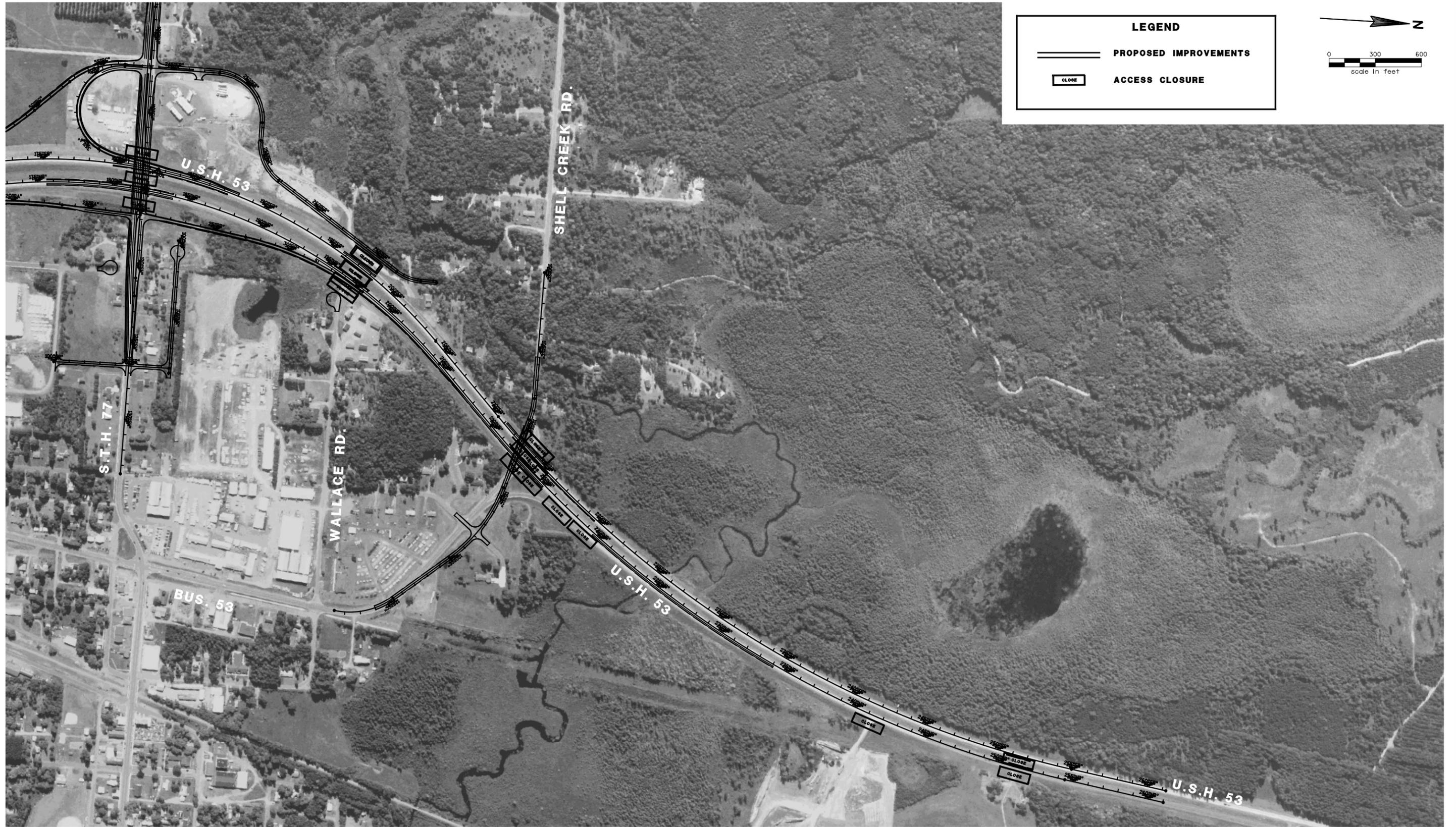


LEGEND	
	PROPOSED IMPROVEMENTS
	ACCESS CLOSURE



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US 53 at WIS 77 - Preferred Alternative
 USH 53 Corridor Preservation, Minong Area
 Project 1195-01-00
 Wis/DOT
 Job #6190
 11/25/2011

Figure 2B

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US 53 at County T - Preferred Alternative

USH 53 Corridor Preservation, Minong Area
Project 1195-01-00

Wis/DOT
Job #6190
11/25/2011

Figure 3

APPENDIX E

2010 US Census Data

Table 1 (US 53 at County F)
Population and Race for Town of Brooklyn, Washburn County, and the State of Wisconsin (2010 US Census)

Demographic Group	Town of Brooklyn		Washburn County		State of Wisconsin	
	Number	% of Population	Number	% of Population	Number	% of Population
Households	116	NA	6,916	NA	2,279,768	NA
Population	254	100	15,911	100	5,686,986	100
White	248	97.6	15,343	96.4	4,902,067	86.2
Minorities	6	2.4	568	3.6	784,919	13.8
• Black	0	0	36	0.2	359,148	6.3
• AIAN ⁽¹⁾	0	0	186	1.2	54,526	1.0
• Asian	2	0.8	63	0.4	129,234	2.3
• NHPI ⁽²⁾	0	0	2	<0.1	1,827	<0.1
• Other Race	1	0.4	49	0.3	135,867	2.4
• Two or More Races	3	1.2	232	1.5	104,317	1.8
• Hispanic Origin ⁽³⁾	2	0.8	208	1.3	336,056	5.9

Source: Year 2010 U.S. Census Demographic Profiles (DP-1)

⁽¹⁾ AIAN = American Indian or Alaska Native

⁽²⁾ NHPI = Native Hawaiian & Other Pacific Islander

⁽³⁾ Those of Hispanic Origin may also consider themselves white or of another race; therefore, population totals and percentages will be greater than 100 percent.

Table 2 (US 53 at County F)
Median Household Income, Per Capita Income and Poverty Levels for Town of Brooklyn, Washburn County, and the State of Wisconsin (2007-2011 American Community Survey)

	Town of Brooklyn	Washburn County	State of Wisconsin
Median household income (in 2011 inflation adjusted dollars)	\$40,625	\$41,135	\$52,374
Per capita income in 2011 (in 2011 inflation adjusted dollars)	\$21,362	\$23,989	\$27,192
Percent of all people below poverty level	4.9%	12.1%	12.0%

Source: US Census Bureau, 2007-2011 American Community Survey.

Table 3 (US 53 at WIS 77)
Population and Race for Village of Minong, Washburn County, and the State of Wisconsin (2010 US Census)

Demographic Group	Village of Minong		Washburn County		State of Wisconsin	
	Number	% of Population	Number	% of Population	Number	% of Population
Households	238	NA	6,916	NA	2,279,768	NA
Population	527	100	15,911	100	5,686,986	100
White	490	93.0	15,343	96.4	4,902,067	86.2
Minorities	8	1.5	568	3.6	784,919	13.8
• Black	2	0.4	36	0.2	359,148	6.3
• AIAN ⁽¹⁾	2	0.4	186	1.2	54,526	1.0
• Asian	1	0.2	63	0.4	129,234	2.3
• NHPI ⁽²⁾	0	0	2	<0.1	1,827	<0.1
• Other Race	24	4.6	49	0.3	135,867	2.4
• Two or More Races	8	1.5	232	1.5	104,317	1.8
• Hispanic Origin ⁽³⁾	32	6.1	208	1.3	336,056	5.9

Source: Year 2010 U.S. Census Demographic Profiles (DP-1)

⁽¹⁾ AIAN = American Indian or Alaska Native

⁽²⁾ NHPI = Native Hawaiian & Other Pacific Islander

⁽³⁾ Those of Hispanic Origin may also consider themselves white or of another race; therefore, population totals and percentages will be greater than 100 percent.

Table 4 (US 53 at WIS 77)
Median Household Income, Per Capita Income and Poverty Levels for Village of Minong, Washburn County, and the State of Wisconsin (2007-2011 American Community Survey)

	Village of Minong	Washburn County	State of Wisconsin
Median household income (in 2011 inflation adjusted dollars)	\$35,839	\$41,135	\$52,374
Per capita income in 2011 (in 2011 inflation adjusted dollars)	\$21,246	\$23,989	\$27,192
Percent of all people below poverty level	7.3%	12.1%	12.0%

Source: US Census Bureau, 2007-2011 American Community Survey.

**Table 5 (US 53 at County T)
Population and Race for Town of Wascott, Washburn County, and the State of Wisconsin (2010 US Census)**

Demographic Group	Town of Wascott		Douglas County		State of Wisconsin	
	Number	% of Population	Number	% of Population	Number	% of Population
Households	340	NA	18,555	NA	2,279,768	NA
Population	763	100	44,159	100	5,686,986	100
White	702	92.0	41,166	93.2	4,902,067	86.2
Minorities	61	8.0	2,993	7.8	784,919	13.8
• Black	48	6.3	486	1.1	359,148	6.3
• AIAN ⁽¹⁾	5	0.7	868	2.0	54,526	1.0
• Asian	2	0.3	376	0.9	129,234	2.3
• NHPI ⁽²⁾	0	0	8	<0.1	1,827	<0.1
• Other Race	0	0	82	0.2	135,867	2.4
• Two or More Races	6	0.8	1,173	2.7	104,317	1.8
• Hispanic Origin ⁽³⁾	9	1.2	494	1.1	336,056	5.9

Source: Year 2010 U.S. Census Demographic Profiles (DP-1)

⁽¹⁾ AIAN = American Indian or Alaska Native

⁽²⁾ NHPI = Native Hawaiian & Other Pacific Islander

⁽³⁾ Those of Hispanic Origin may also consider themselves white or of another race; therefore, population totals and percentages will be greater than 100 percent.

**Table 6 (US 53 at County T)
Median Household Income, Per Capita Income and Poverty Levels for Town of Wascott, Washburn County, and the State of Wisconsin (2007-2011 American Community Survey)**

	Town of Wascott	Douglas County	State of Wisconsin
Median household income (in 2011 inflation adjusted dollars)	\$53,958	\$44,140	\$52,374
Per capita income in 2011 (in 2011 inflation adjusted dollars)	\$23,767	\$24,741	\$27,192
Percent of all people below poverty level	9.5%	12.9%	12.0%

Source: US Census Bureau, 2007-2011 American Community Survey.

APPENDIX F

Agency Correspondence

Received:

Natural Resources Conservation Service – Northwest Area Office

U.S. Environmental Protection Agency (3 letters)

U.S. Fish and Wildlife Service

Wisconsin Department of Agriculture, Trade and Consumer Protection

Wisconsin Department of Natural Resources (3 letters)

Wisconsin Department of Transportation – Bureau of Aeronautics

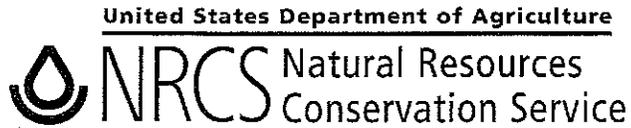
Sent:

Sample Agency Coordination Letter

Agency Coordination Distribution List

Sample Local Official Invitation

Public Information Meeting Distribution List
(Local Officials, Agencies and Native American Tribes)



Northwest Area Office
1304 N. Hillcrest Pkwy Ste A
Altoona, WI 54720-2597
Phone: (715) 832-6547
Fax: (715) 832-6975

November 27th, 2009

Marc Bowker
WisDot Project Manager
WisDot System Development
7102 Green Valley Road
Spooner, WI 54801

RE: USH 53 Corridor Preservation-CTH in Wascott Douglas County, Wisconsin

Dear Marc:

I have reviewed the above mentioned project, with regard to requirements of the Farmland Protection Policy Act (FPPA).

Because there are no viable alternatives to consider for this project, provisions of the FPPA do not apply and no further action is needed on your part to comply with its requirements.

Thank you for the opportunity to comment on this proposed project. Please send any future project reviews with regards to FPPA requirements to my address above.

Sincerely,



Tim Miland
Area Resource Soil Scientist
USDA-NRCS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
77 West Jackson Boulevard
Chicago, IL 60604

Date: July 16, 2008

Mr. Mark Bowker
WisDOT Project Manager
Division of Transportation System Development
Northwest Region-Spooner Office
7102 Green Valley Road
Spooner, Wisconsin 54801

Document: Scoping for the USH53 Corridor Preservation project between CTH F in the town of Brooklyn to CTH Y in the town of Gordon in Washburn and Douglas Counties, Wisconsin, federal agency: FHWA, letter dated March 27, 2008

Dear Mr. Bowker:

The NEPA Implementation Section has received the document listed above. Under the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations, and Section 309 of the Clean Air Act; U.S. EPA reviews and comments on major federal actions. Typically, these reviews focus on Environmental Impact Statements, but we also have the discretion to review and comment on other environmental documents prepared under NEPA if interest and resources permit.

We need more information before we can comment on this project. In particular, we need more information about wetland impacts. Please contact us when you have an estimate of the types and acreage of wetland that will be impacted. If you have any questions, please call Julie Guenther, of my staff, at 312-886-3172 or e-mail her at guenther.julia@epa.gov. Thank you for providing preliminary information about the project.

Sincerely,

A handwritten signature in cursive script that reads "Julie Guenther for".

Kenneth A. Westlake, Supervisor
NEPA Implementation
Office of Enforcement & Compliance Assurance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

NOV 04 2011

REPLY TO THE ATTENTION OF:

Marc Bowker
Northwest Region
Wisconsin Department of Transportation
W7102 Green Valley Road
Spooner, Wisconsin 54801

E-19J

Re: Request for Comments on the Preferred Alternative Alignment, US 53 from Schnagl Road to Wascott/Gordon Town line in Washburn and Douglas Counties, Wisconsin

Dear Mr. Bowker:

The U.S. Environmental Protection Agency has received the request for comments on the above-mentioned project. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508) and Section 309 of the Clean Air Act.

The Wisconsin Department of Transportation (WisDOT) is studying the US 53 corridor between 0.75 miles north of Schnagl Road in Washburn County and the Wascott/Gordon Town line in Douglas County, a distance of approximately 20 miles. WisDOT aims to develop a long-term vision for the corridor that will be preserved through officially mapping the right-of-way needed for expressway enhancements. EPA sent a letter during scoping in 2008, in which we noted that we needed more information before we could provide substantive comments.

WisDOT has identified alternatives for the US 53 corridor at the intersections of CTH F, WIS 77, and CTH T, which were presented at community meetings in late October 2011. Given the information provided to us, we cannot make comments at this time. Please send us more details regarding impacts to resources, particularly any impacts to wetlands or other aquatic resources.

We appreciate the opportunity to provide comments related to the proposed project throughout the entire process. We look forward to receiving future NEPA documents. Should you have any questions, please do not hesitate to contact me or Elizabeth Poole of my staff at (312) 353-2087 or poole.elizabeth@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth A. Westlake".

Kenneth A. Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 07 2012

REPLY TO THE ATTENTION OF:

E-19J

Marc Bowker
Northwest Region
Wisconsin Department of Transportation
W7102 Green Valley Road
Spooner, Wisconsin 54801

Re: Scoping Request, US 53 from Schnagl Road to Wascott/Gordon Town Line in Washburn and Douglas Counties, Wisconsin

Dear Mr. Bowker:

The U.S. Environmental Protection Agency has received the request for comments on the above-mentioned project. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

The Federal Highway Administration (FHWA) and the Wisconsin Department of Transportation (WisDOT) are studying the US 53 corridor between 0.75 miles north of Schnagl Road in Washburn County and the Wascott/Gordon Town line in Douglas County, a distance of approximately 20 miles. WisDOT aims to develop a long-term vision for the corridor that will be preserved through officially mapping the right-of-way (ROW) needed for expressway enhancements. The proposed project includes altering interchanges, constructing new overpasses and cul-de-sacs, and development of a local transportation network. WisDOT identified alternatives for the US 53 corridor in correspondence dated October 12, 2011. EPA requested more information on the project via correspondence dated November 4, 2011.

The proposed project includes three areas of improvements, as listed below. Based on the information provided, EPA has concerns about aquatic resources, threatened and endangered species, air quality via diesel emissions, and public notification.

- **US 53 at County F:** The County F preferred alternative is a non-interchange alternative that includes a County F underpass under US 53 with right-in, right-out access to north- and southbound US 53. County F would be constructed to provide a direct connection across US 53. Local road connections would be constructed to provide access between US 53 and County F. Access to residential properties in the southwest quadrant of the

County F grade-separation would be replaced with an access to the local road connection between US 53 and County F. Impacts include 21 acres of ROW acquisition, conversion of upland habitat and farmland, 0.6 acres of wetland fill, and encroachment into Silver Lake.

- **US 53 at WIS 77:** The WIS 77 preferred alternative includes a folded diamond interchange with a loop in the southwest quadrant, and includes local road/frontage road connections on the west and east sides of US 53. Multiple direct access points to US 53 to the north and south of the preferred alternative interchange would be closed. The preferred alternative also includes an overpass at US 53 and Shell Creek Road to maintain local access and mobility (Village of Minong emergency services provides service to properties west of US 53). Impacts include 46 acres of ROW acquisition, including conversion of upland habitat (forest and pine plantation) and farmland, 1.4 acres of wetland fill, and reconstruction of the Shell Creek Road culvert over Shell Creek. Shell Creek Road will likely be expanded and the culvert will be replaced.
- **US 53 at County T:** The County T preferred alternative is a non-interchange alternative that consists of a County T overpass with right-in, right-out access to north- and southbound US 53. County T would be realigned approximately 800 feet to the south of its existing interchange with US 53. Local frontage roads are not included. A new north-south local roadway would connect County T to the existing County T intersection with US 53 and will provide right-in, right-out access to southbound US 53. The existing local roads would provide right-in, right-out access to northbound US 53. Impacts include approximately 10 acres of right-of-way acquisition, including conversion of upland habitat (forest and pine plantation) and farmland and 0.5 acres of wetland fill.

Aquatic Resources

EPA acknowledges the nature of the wetland information provided as preliminary. EPA suggests that the draft EA outline how impacts to wetlands were avoided or minimized during project development. In the draft EA, EPA expects to see a detailed evaluation of the type and location of wetland impact and loss resulting from the project. This analysis should include delineation and evaluation of wetlands, including functions and values. We recommend a discussion of direct impacts to aquatic resources within and surrounding the project area, as well as any indirect impacts that occur as a result of the proposed project, which can include runoff, contamination, sedimentation, or changes to hydrology of the remaining portions of wetlands, particularly given the projects proximity to Shell Creek, which is a Wisconsin Exceptional Resource Water. If mitigation is necessary, the draft EA should include information regarding mitigation ratios and type(s) of wetlands that will be restored or created and how wetland hydrology and wetland plant communities will be established at mitigation sites.

EPA reserves its right to provide additional comments regarding this project if it is later determined that an Army Corps' Clean Water Act Section 404 permit may be needed. We recommend the following measures to further minimize impacts to wetlands during construction:

- Perform construction in wetlands during frozen ground conditions, if feasible;
- Minimize width of temporary access roads;
- Use easily-removed materials for construction of temporary access roads and staging areas (e.g., swamp/timber mats) in lieu of materials that sink (e.g., stone, rip-rap, wood chips);
- Use swamp/timber mats or other alternative matting to distribute the weight of the construction equipment. This will minimize soil rutting and compaction;
- Use vehicles and construction equipment with wider tires or rubberized tracks, or use low ground pressure equipment to further minimize impacts during construction access and staging;
- Use long-reach excavators, where appropriate, to avoid driving or staging in wetlands; and
- Place mats under construction equipment to contain any spills.

Threatened and Endangered Species

The provided materials states that pine plantation habitat will be impacted via acquisition for transportation ROW. Because the project area is within the range of the Kirtland's warbler and proposes to impact pine forests, EPA recommends continued coordination with the U.S. Fish and Wildlife Service (USFWS) to ensure that impacts to the Kirtland's warbler, if present in the pine plantations proposed for acquisition, are minimized and, if necessary, mitigated. Coordination correspondence, details, and any negotiated mitigation should be included in the draft EA.

Diesel Emissions

Although every construction site is unique, common actions can reduce exposure to diesel exhaust. EPA recommends that FHWA commit to the following actions during construction:

- Using low-sulfur diesel fuel (less than 0.05% sulfur).
- Retrofitting engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Positioning the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, thereby reducing the fume concentration to which personnel are exposed.
- Using catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.

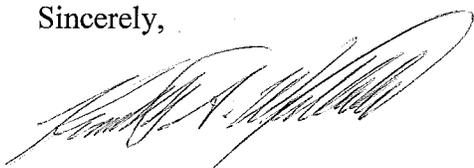
- Using enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintaining diesel engines, which is essential to keeping exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reducing exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Purchasing new vehicles that are equipped with the most advanced emission control systems available.
- With older vehicles, using electric starting aids such as block heaters to warm the engine reduces diesel emissions.

Public Notification

Because US 53 is a major roadway in northwestern Wisconsin, EPA recommends a comprehensive public outreach to inform both residents of and visitors to the project area about construction timing and potential traffic impacts.

Thank you in advance for your consideration of these comments. EPA appreciates the opportunity to provide input at all stages of project development. If you have any questions, please contact me or Elizabeth Poole of my staff at 312-353-2087 or at poole.elizabeth@epa.gov.

Sincerely,



Kenneth Westlake
Chief, NEPA Implementation Section
Office of Enforcement and Compliance Assurance

cc: Jill Utrup, U.S. Fish and Wildlife Service
Bethaney Bacher-Gresock, Federal Highway Administration
Amy Cronk, Wisconsin Department of Natural Resources



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Green Bay ES Field Office
2661 Scott Tower Drive
New Franken, Wisconsin 54229-9565
Telephone 920/866-1717
FAX 920/866-1710

April 2, 2008

Mark Bowker
Wisconsin Department of Transportation
Northwest Region-Spooner Office
W7102 Green Valley Road
Spooner, Wisconsin 54801

re: Proposed Project
USH 53
CTH F to CTH Y
Expressway Enhancements
Washburn and Douglas Counties, Wisconsin

Dear Mr. Bowker:

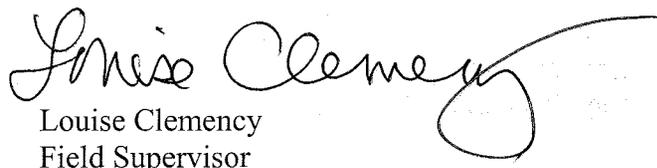
The U.S. Fish and Wildlife Service (Service) has received your letter dated March 28, 2008, requesting our review of the subject project. Recent reductions in funding for the Service's Ecological Services programs have resulted in a greatly reduced staff at this office. Therefore, we are currently unable to provide the requested review of this project.

We have attached for your consideration general guidance for avoiding impacts to fish and wildlife resources from transportation projects.

If you are seeking information on potential project impacts to Federally-listed species, candidate species, or Critical Habitat, we encourage you to visit the Service's Region 3 Section 7 Technical Assistance web site at <http://www.fws.gov/midwest/endangered/section7/s7process/>. There, you will find guidance to assist you in fulfilling the requirements for consultation under Section 7 of the Endangered Species Act, including a step-by-step explanation of the section 7 process, species distribution lists, species life history information and conservation measures, and examples of typical letters. If your review of the above material suggests that your project may impact listed species or Critical Habitat, please contact this office for additional assistance.

If you have questions or need further information, you may contact us at 920-866-1717.

Sincerely,


Louise Clemency
Field Supervisor

Enclosure

General Guidance on Avoiding and Minimizing Project Impacts to Fish and Wildlife

Wetland Mitigation

In refining and selecting project alternatives, efforts should be made to select an alternative that does not adversely impact wetlands. If no other alternative is feasible and it is clearly demonstrated that project construction resulting in wetland disturbance or loss cannot be avoided, a wetland mitigation plan should be developed that identifies measures proposed to minimize adverse impacts and replace lost wetland habitat values and other wetland functions and values. Any project that has new impacts to wetlands or waterways, including seasonal ephemeral and intermittent streams, should include design features such as culverts to retain hydrological connection between areas fragmented by the project. If stream or wetland impacts will occur, state or federal permits may be needed.

Migratory Birds

Under the Migratory Bird Treaty Act of 1918, as amended, it is unlawful to take, capture, kill, or possess migratory birds, their nests, eggs, and young. If migratory birds are known to nest on any structures which may be disturbed by project construction, activities should begin before the initiation of the breeding season for those species or after breeding has concluded. Alternatively, the structures can be *tightly screened* before the breeding season to prevent nesting. Generally, we recommend that screening or any other habitat disturbance occur before May 1 or after August 30 to minimize potential impacts to migratory birds, but please be aware that some species may initiate nesting before May 1.

Bald and Golden Eagle Protection Act

Guidance on avoiding disturbance of bald eagles is available at the Service's "Bald Eagle Management Guidelines & Conservation Measures" web site at <http://www.fws.gov/midwest/eagle/guidelines/index.html>.

Other Fish and Wildlife

It has been well documented that wildlife often use riparian areas along streams and rivers as travel corridors, particularly as roads and highways have bisected the landscape. The Service supports and encourages the maintenance or creation of habitat connectivity wherever possible. As such, we recommend that you install culverts that do not impede the movement of water, sediments, or aquatic species along existing waterways. Culverts should be designed and constructed in such a way as to allow small to medium-sized terrestrial or amphibious species to safely follow the stream corridor without being forced to cross the road. This may be accomplished by enlarging culverts and including a continuous raised shelf along one or both sides of the culvert, connecting to stream banks on either side.

We recommend that bridges and abutments be designed and constructed in such a way as to allow terrestrial wildlife to pass under the bridge without entering the river during normal flow conditions. This may require lengthening the bridge, limitations on the use of exposed riprap, modifications to the surface of the riprap (e.g., grouting the surface or filling with soil or other natural materials), or modifications in the substrate and/or slope at the base of the abutments, as some wildlife species cannot or prefer not to traverse areas of riprap.



State of Wisconsin
Jim Doyle, Governor

Department of Agriculture, Trade and Consumer Protection
Rod Nilsestuen, Secretary

November 5, 2009

Mr. Marc Bowker
Wisconsin Department of Transportation
NW Region – Spooner Office
7102 Green Valley Road
Spooner, WI 54801

Dear Mr. Bowker:

Re: USH 53: Minong Area Corridor Preservation Study
Douglas and Washburn Counties
Project ID: 1195-01-00

The Department of Agriculture, Trade, and Consumer Protection (DATCP) has reviewed the notification and any supplemental information you have provided concerning the potential need for an agricultural impact statement (AIS) for the above project. We have determined that an AIS will not be prepared for this project at this time. It would not be productive for DATCP to contact the affected farmland owners regarding the project's impact on their farm when the actual project may not take place until the distant future. Land ownership and land use may change significantly before WisDOT acquires the necessary property.

When WisDOT decides to move forward with the acquisition of farmland for the proposed project, DATCP should be re-notified. DATCP requests that you include this commitment in the Environmental Assessment that is being prepared for this project. The commitment could state: "At the time that any part of this project moves into final design, DATCP should be notified. If more than five acres of property would be acquired from any agricultural operation, an Agricultural Impact Statement must be prepared. If five acres or less is involved, DATCP has discretion whether to prepare an AIS. WisDOT cannot begin negotiation with a property owner until 30 days after the AIS has been published, if an AIS would need to be prepared for the project."

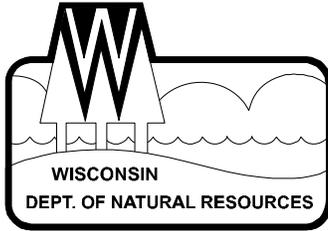
Please call me with any questions at 608/224-4650.

Sincerely,

Peter Nauth
Agricultural Impact Program
(608) 224-4650

Agriculture generates \$51.5 billion for Wisconsin

2811 Agriculture Drive • PO Box 8911 • Madison, WI 53708-8911 • Wisconsin.gov



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
John Gozdziwski, Regional Director

Northern Region Headquarters
810 W. Maple Street
Spooner, Wisconsin 54801
Telephone 715-635-2101
FAX 715-635-4105
TDD 715-635-4001

April 17, 2008

Marc Bowker
DOT, Northwest Region – Spooner Office
P.O. Box 282
Spooner, WI 54801

RE: **I.D. # 1195-01-00**
USH 53 Corridor Preservation Study (Lampson – Gordon)
Washburn/Douglas County

Dear Marc:

This letter is in response to your inquiry for our comments on what natural resources the above referenced corridor preservation study could impact. Our comments identify existing resources within a 1.5-mile radius of the intersections at CTH F, STH 77 and CTH T, and in some cases provide suggestions on how to protect those resources. Please keep in mind that this is a very broad overview of potential resource issues. When an alternatives analysis is provided we will conduct a more in-depth field investigation and review.

SITE-SPECIFIC COMMENTS FOR EACH INTERSECTION

CTH F Intersection – The following comments are site-specific to the 1.5-mile radius around this intersection.

Surface Waters - The following surface waters are located within the study area:

- Silver Lake – A landlocked, clear water seepage lake which contains a warmwater fishery consisting mostly of walleyes, northern pike, large mouth bass and panfish. Wildlife usage includes muskrats and nesting and migratory waterfowl.
- Unnamed lakes – There are several small unnamed lakes in the project area. They are all landlocked seepage lakes, most of which are subject to winterkill conditions. A small portion of them contain small sustainable fish populations, mainly consisting of minnows, largemouth bass and panfish. Several of them offer nesting waterfowl habitat.

State Natural Area – The Lampson Moraine Pines State Natural Area (SNA) is located 1.8 miles west on Pierce Road. The Lampson Moraine Pines SNA is a northern dry-mesic forest containing old-growth red pine, many more than two feet in diameter, with occasional white pine. Also present is a northern wet and wet-mesic forest with a range

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of successional stages. Several great blue herons have used the pines as a rookery. The balance of the tract is a recovering northern wet-mesic forest. The lowland has a high water table making access difficult in wet seasons. Lampson Moraine Pines is owned by the DNR and was designated a SNA in 1973.

STH 77 Intersection – The following comments are site-specific to the 1.5 mile radius around this intersection.

Surface Waters – The following surface waters are located within the study area:

- Pokegama Lake – Contains a warmwater fishery which consists mainly of northern pike, largemouth bass and panfish. There are extensive wetlands located at the east end of the lake near the outlet to Shell Creek. Wildlife use includes muskrat, beaver and nesting waterfowl.
- Bond Lake – This lake is located near the headwaters of Shell Creek, and most of the outlet flow comes from spring activity within the lake. Fishery consists of small numbers of northern pike, largemouth bass and panfish. Approximately 40% of the lake is surrounded by bog. Wildlife use includes nesting waterfowl.
- Shell Creek – A spring-fed and drainage stream that begins at Bond Lake. From its headwaters at Bond Lake down to CTH I, Spring Creek is currently classified as a Class II brook trout stream. At CTH I it becomes a warmwater fishery with populations of walleye, northern pike and panfish. This creek is classified as an Outstanding Resource Water (ORW). ORW's are surface waters that provide valuable fisheries, hydrologically or geologically unique features, outstanding recreational opportunities, unique environmental settings, and which are not significantly impacted by human activities. New crossings of this high-quality stream should be avoided, as well as any direct or secondary impacts to the riparian wetlands located along the stream. The DNR has easements on some stream bank frontage.
- Shell Creek tributary (T42N, R12W, Sec. 22) – This tributary contains excellent spawning habitat for trout.
- Tucker Lake – A landlocked seepage lake subject to winterkill conditions and contains small populations of minnows.
- Round Lake – A landlocked seepage lake subject to winterkill conditions. Fishery consists of minnows.
- Unnamed lakes – There are several small unnamed lakes in the project area. The majority of them are landlocked seepage lakes, most of which are subject to winterkill conditions. A small portion of them contain small sustainable fish populations, mainly consisting of minnows, largemouth bass and panfish. Several of them offer nesting waterfowl habitat.

CTH T Intersection – The following comments are site-specific to the 1.5-mile radius around the intersection.

Surface Waters – The following surface waters are found within the project area:

- Bergen Creek Springs – A spring pond managed for brook trout. Heavy beaver use in the past has caused a sedge meadow to develop around the entire pond and outlet stream. Wildlife use includes small furbearers and nesting waterfowl.
- Bergen Creek – A clear-water Class II brook trout stream from the headwaters down to the Leader Lake Road crossing in Section 22. Downstream from there it is classified as a Class III brook trout stream. It also contains populations of northern pike, white sucker, burbot and minnows. Wildlife usage includes beaver and migrating and nesting waterfowl. The creek has extensive adjoining wetlands.
- Wascott Lake – Acid bog lake surrounded entirely by a tamarack and leatherleaf bog. It is subject to winterkill conditions and contains no fishery. Wildlife use includes migrating waterfowl.
- Sullivan Lake – Seepage acid bog lake with an intermittent outlet to Bergen Creek. Subject to winterkill conditions, but has small minnow population. Surrounded by tamarack, leatherleaf and spruce bog and provides some waterfowl nesting habitat.
- Red Lake – Seepage lake with populations of northern pike, walleyes, bass and panfish. The adjacent wetlands provide nesting habitat for waterfowl and loons.
- Crotty Lake – Seepage lake containing populations of bluegills and bullheads. There is a fringe of bog around lake which provides nesting waterfowl habitat.
- Muck Lake – Seepage acid lake with an intermittent outlet to Bergen Creek and is surrounded by bog. It is subject to winterkill conditions, but has populations of minnows. Provides habitat for nesting waterfowl and loons.
- Peterson Lake – Landlocked seepage lake which experiences occasional winterkill. This lake has been used for propagation of minnows in the past. There is some bog surrounding lake and provides good habitat for waterfowl and loon nesting.
- Yoekel Lake – Landlocked acid bog lake, experiences total winterkill conditions every year. Surrounded by bog, and provides some nesting waterfowl habitat.
- Buffalo Lake – Seepage lake with an intermittent outlet to Bergen Creek. The outlet has a five-foot headwater control structure which maintains the lake level. Contains populations of northern pike, bass and bluegills. Has a floating bog and extensive wetlands. Good habitat for muskrats, nesting and migratory waterfowl.
- Unnamed lakes – There are several small unnamed lakes in the project area. Most of them are landlocked seepage lakes, most of which are subject to winterkill conditions. A small portion of them contain small sustainable fish populations, mainly consisting of minnows, largemouth bass and panfish. Several of them offer nesting waterfowl habitat.

GENERAL COMMENTS FOR ENTIRE STUDY AREA

The following general comments pertain to the entire project area and are applicable to each intersection:

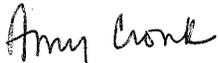
Wetlands - Several wetland types are found throughout the entire project area. Shallow open water communities, deep marshes, shallow marshes, ephemeral ponds and bogs are examples of the wetland types that are found throughout this segment of the USH 53 corridor. Wetlands are often associated with threatened and endangered plant and bird species, as we discuss in the next section. These areas are also very important for waterfowl production, furbearers, frogs, turtles and aquatic invertebrates, as well as providing floodwater retention and filtering of stormwater. All efforts should be made to avoid wetland impacts.

Threatened/Endangered/Special Concern Species – Several bird and plant species have been found within the project area. We have attached specific species information and avoidance recommendations at the end of this letter.

Recreational Trails - A recreational trail corridor runs through the study area. The Wild Rivers State Trail (WRT) provides opportunities for activities such as ATV riding, snowmobiling and hiking. This trail is located on a federally granted right-of-way and cannot be used for any other purposes than recreation. In addition, the WRT is in the Rails to Trails Program which also means it must remain a recreational trail. Any crossings of the WRT would have to be a separated grade and would have to span the entire right-of-way. This would preserve the railroad corridor for any future restoration of rail services.

We look forward to continued coordination on this corridor preservation study. If you have any questions regarding the information in this letter, please feel free to call me at 715-635-4229.

Sincerely,



Amy Cronk
Environmental Review Coordinator

cc: Amy Adrihan – DOT, Northwest Region – Superior
Todd Polum, SRF

Endangered, Threatened, and Special Concern Species found in Highway 53 Preservation Study limits from Lampson to Gordon (April 2008)

The following plant and animal species are known to occur in or near the corridor for the USH 53 Preservation Study area from Lampson to Gordon. Species information and some avoidance recommendations are given below.

Group	Scientific Name	Common Name	State Status *
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	SC
	<i>Accipiter gentilis</i>	Northern Goshawk	SC
	<i>Pandion haliaetus</i>	Osprey	THR
Mammal	<i>Canis lupus</i>	Chain Lake Wolf Pack	SC
Plant	<i>Artemisia frigida</i>	Prairie Sagebrush	SC
	<i>Cypripedium parviflorum</i>	Northern Yellow Lady's Slipper	SC
Other	<i>Emydoidea blandingii</i>	Blanding's Turtle	THR

SC = Special Concern (those species about which some problem of abundance or distribution is suspected but not yet proved.); THR = Threatened

Bald Eagle (*Haliaeetus leucocephalus*) – A species of Special Concern in Wisconsin and a Federally listed threatened species, prefer to nest in tall trees (usually white pine) with a commanding view of nearby lakes or streams. Eagle nests have been previously surveyed at Silver Lake, Bond Lake, Pokegama Lake and Shell Creek. Eagles return to nest sites in late winter or early spring and eggs are laid in late March or early April. The first egg hatches about 40 days later.

The following steps should be followed to avoid negative impacts to or incidental take of Bald Eagles:

1. The project area should be surveyed for large aspen or white pine trees (diameter of ≥ 12 inches) containing eagle nests before any trees are cleared from the property;
2. If a nest is found, avoid disturbances such as land clearing and tree removal within 330- feet of the nest year round;
3. Avoid nest disturbances within 330-660 feet during the February 15th to August 15th breeding and nesting season;
4. Bald Eagle roosts and feeding sits should be protected within 660 feet of a nest. If tree removal occurs, it is suggested that several super-canopy trees be left for future nest tree replacement;
5. Leave standing as many large dead trees as possible, especially trees with a diameter of ≥ 12 inches.

Northern Goshawk (*Accipiter gentiles*) – A bird listed as a special concern species in Wisconsin which is usually found in northern maple-hemlock-pine forests. A northern goshawk nest has previously been surveyed along Old Hwy. 53. The breeding season extends from early April through mid-May.

The northern goshawk is identified as a Species of Greatest Conservation Need in the Wisconsin Wildlife Action Plan. Human use of roads and trails near nest sites during the breeding and nesting seasons may disturb goshawks and cause them to abandon nests and possibly territories. The steps listed above for preventing impacts to nesting eagles are similar to northern goshawk nesting sites avoidance recommendations.

Osprey (*Pandion haliaetus*) – The osprey is a threatened bird species in Wisconsin. It prefers large trees in isolated areas in proximity to large areas of surface water, large complexes of deciduous forest, coniferous forest, wetland, and shrub communities. Large lakes and rivers with nearby tall pine trees are preferred for nesting. Osprey nests have previously been surveyed near Bergen Creek. The breeding season extends from late April through August. The steps listed above for preventing impacts to nesting eagles are similar to osprey nesting sites avoidance recommendations.

The osprey is also recognized as a Species of Greatest Conservation need in the Wisconsin Wildlife Action Plan. Primary factors associated with the proposed preservation study that could adversely affect osprey nesting sites include removing “snag” trees that could provide nest sites and altering or filling wetland habitats.

Gray Wolf (*Canis lupus*) – The Chain Lake Wolf Pack has been previously surveyed near the CTH T/USH 53 intersection area. The gray wolf has been de-listed in Wisconsin but is currently classified as a “Protected Wild Animal”. It is also recognized as a Species of Greatest Conservation Need in the Wisconsin Wildlife Action Plan.

Primary factors associated with road construction that could adversely affect the gray wolf include:

- Habit fragmentation and human development associated with highways and interchanges reduces the area of suitable habitat which may reduce the potential carrying capacity of wolves in the future.
- Future human developments of highway areas may reduce wolves’ ability to disperse across the landscape and could cause isolation of portions of the wolf population.

Priority conservation actions include maintaining existing wolf habitat. This includes protecting suitable forested habitat linkages and corridors for wolf dispersal within Wisconsin to maintain genetic diversity in wolf populations.

Prairie Sagebrush (*Artemisia frigida*) - A plant of Special Concern in Wisconsin, prefers very dry prairies and sand terraces. Blooming occurs from early August through late September. Optimal identification period is from early August to late September. Prairie sagebrush has been previously surveyed near the old railroad ballast along the Wild Rivers Trail.

Northern Yellow Lady’s-slipper (*Cypripedium parviflorum*) – A plant of special concern in Wisconsin, prefers fens, calcareous swales, and rich springy forest edges. Flowering occurs from late May through late June. Optimum identification period is late May through early July. In 1996, yellow lady’s slippers were translocated near Greenwood Junction as a result of a previous transportation project.

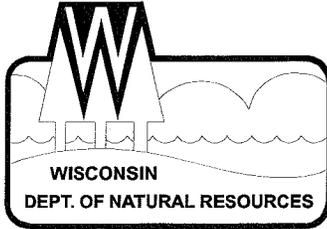
Blanding’s Turtle (*Emydoidea blandingii*) – The Blanding’s Turtle is listed as threatened in Wisconsin. It prefers sedge meadows, wet and wet-mesic prairie, open-water marshes, backwater sloughs, prairie potholes, large ponds, slow-moving rivers and shallow lakes. The breeding season occurs from April through September. Blanding’s turtles have previously been surveyed near the Crotty Lake area.

The Blanding’s Turtle is also listed as a Species of Greatest Conservation Need in the Wisconsin Wildlife Action Plan. Threats to the Blanding’s Turtle associated with road construction include:

- Land fragmentation resulting in increased highway mortality and habitat loss
- Wetland losses and degradation (especially from invasive species)

Priority conservation actions include:

- Long-term protection of essential habitat. Habitats must be sufficiently large and complex to meet all needs and not fragmented by roads and development.
- Restoring wetlands and establishing wetland buffers.
- Restoring and maintaining connectivity and quality of nesting habitats.
- Installing permanent underpasses and/or barriers on highway projects where Blanding's mortality is believed to impact species recovery.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
John Gozdzialski, Regional Director

Northern Region Headquarters
810 W. Maple Street
Spooner, Wisconsin 54801
Telephone 715-635-2101
FAX 715-635-4105
TDD 715-635-4001

October 13, 2008

Marc Bowker
DOT, Northwest Region – Spooner Office
P.O. Box 282
Spooner, WI 54801

RE: **I.D. # 1195-01-00**
USH 53 Preservation Study (Lampson - Gordon)
Washburn/Douglas County

Dear Marc:

This letter is in follow-up to your submittal of conceptual design alternatives and our subsequent joint field review for the above referenced project. The purpose of this letter is to provide our comments on the alternatives that were submitted to us as part of this study.

COMMENTS ON ISSUES COMMON TO ALL ALTERNATIVES:

WETLANDS - TRANS 401.106(6) describes the buffer zones that are needed to provide protection to wetlands and other surface waters that are located adjacent to proposed construction projects. It is our expectation that these standards will be incorporated into all aspects of this study.

Please note that the Wisconsin Wetland Inventory maps are not always complete and may not show the locations of wetlands under two acres in size. Some of the areas along the proposed interchange locations may need to be walked to verify or identify the locations of wetlands.

PRIVATE RESIDENCE ACCESS: There are private residences along USH 53 that may lose access as a result of the proposed interchanges. As with previous preservation studies on USH 53, we request that mapping future access to their residences is included as part of this study. Identifying and resolving these types of private access issues should be included in these studies because it would help the local municipalities with future land use planning. In addition, due to increasing development throughout the area, it may be even more difficult to identify an alternative access route for private residents when these interchanges are built.

OLD ROAD CORE REMOVALS – We encourage removing any old road beds and blending those areas into the surrounding natural terrain.

*Quality Natural Resources Management
Through Excellent Customer Service*



COMMENTS ON CTH F ALTERNATIVES:

TREGO FIVE: In the summer of 1994, USH 53 from Trego to Lampson was upgraded and constructed to a four-lane expressway. In an effort to mitigate wetland impacts associated with the construction project, WisDOT created five wetlands between Trego and Lampson which later became known as the "Trego Five". All of these created wetlands are located within this preservation study, and three of them lay within the proposed interchange project limits at Lampson.

The created wetlands are found at the following locations within the proposed Lampson interchange site (also see attached maps):

- **STONE HOUSE SITE:** There is a stone house on northbound USH 53 just south of CTH F (east). The wetland is located along the USH 53 ditchline south of the stone house.
- **CTH F SITE:** This wetland is found on the west side of the intersection of CTH F and Birchwood Drive near Silver Lake.
- **CEMETERY SITE:** This wetland is found in the southeast quadrant of the intersection of USH 53 and Palmer Drive, across the road from the cemetery.

These wetland creation sites were not formally accepted by our agency as wetland mitigation sites, and WisDOT did not receive mitigation credits for them. However, in the final monitoring report for the Trego Five submitted in 2000, WisDOT stated that they believe these sites are now functioning wetlands and anticipated that their success would be realized and wetland credit would be granted.

We believe a formal wetland delineation should be conducted on these sites to determine if they are functioning wetlands. We have brought this issue to the attention of WisDOT environmental staff, and we understand your agency will be meeting internally to discuss further.

NEW CONNECTOR ROAD FROM CTH F TO PALMER DRIVE: Both Alternatives A and B propose to construct a new connector road between CTH F and Birchwood Drive on the west side of USH 53. This area is currently an upland forest consisting mainly of hardwoods and the topography contains many areas of hills and valleys. There is also a wetland complex located at the north end of the property, with smaller wetlands dispersed throughout the area. Constructing a new road through this area could cause fragmentation of wildlife habitat, increase and change the rate of stormwater runoff to the existing wetlands through the presence of impervious surfaces, and could change the topography and drainage with the addition of a new road core.

It appears that there are alternatives to constructing the road between CTH F and Birchwood Drive. If the portion of the connector road between Birchwood Drive and Palmer Drive was constructed, perhaps an overpass/underpass of Birchwood Drive at USH 53 would provide the local residents with access to the proposed interchange. Another alternative could include leaving the at-grade crossing of Palmer Drive and USH 53 open. Please provide us with further discussion on other alternatives to building the new road between CTH F and Birchwood Drive.

SILVER LAKE: Both of the alternatives for the proposed interchange at Lampson would bring CTH F closer to Silver Lake and construct new ramps close to the lake. As mentioned in our April 24, 2008 comment letter, Silver Lake is a landlocked, clear water

seepage lake which contains a warmwater fishery consisting mostly of walleyes, northern pike, largemouth bass and panfish. Wildlife usage includes muskrats and nesting and migratory waterfowl. There is currently an active eagle nest on the north end of Silver Lake, but it should not be impacted by the proposed activities.

We believe constructing the interchange ramps this close to Silver Lake has the potential to negatively impact the water quality and other natural resources associated with the lake. For example, the additional impervious surfaces could increase the amount and rate at which stormwater is discharged into Silver Lake. The addition of impervious surfaces would prevent stormwater from percolating through the ground and into the groundwater. The vegetative buffers and wetlands that filter pollutants and absorb stormwater before it reaches Silver Lake would potentially be removed or diminished in quality.

There is also a small mapped floodplain where CTH F currently runs adjacent to the southern portion of the lake. As required under Chapter NR 116, Wisconsin's Floodplain Management Program, if the road alignment would be raised or any fill would need to be brought into this area, it may be necessary to conduct a study to determine if these activities would change the flood elevations associated with the lake.

In an effort to minimize direct and secondary impacts to Silver Lake, we believe WisDOT should consider other feasible alternatives that would move the proposed interchange further away from the lake. If, after looking at all practicable alternatives, it is determined that the preferred alternative is to build the interchange in the proposed location, it is vitally important that the Environmental Assessment (EA) reflects a commitment by WisDOT to design the proposed interchange in a fashion that will completely meet the stormwater standards in TRANS 401 to minimize impacts to Silver Lake.

COMMENTS ON STH 77 ALTERNATIVES:

SHELL CREEK: We understand that as part of the proposed interchange in Minong, the USH 53/Shell Creek Road intersection may need to be re-designed as an overpass. This would result in raising and widening the footprint of Shell Creek Road where it currently crosses Shell Creek on the west side of USH 53. As mentioned in our previous April 24, 2008 letter, this portion of Shell Creek is classified as a Class II brook trout stream and an Outstanding Resource Water (ORW). Timing restrictions would be needed to prevent in-stream related construction during the spawning and nursery period for trout.

There is also a mapped floodplain along this portion of Shell Creek so again, the standards of Chapter NR 116 would need to be met. If the proposal would involve raising or widening Shell Creek Road at Shell Creek, a hydraulic and hydrologic (H&H) study may have to be conducted to ensure that the culvert would be properly sized and would not increase the backwater flood elevations.

COMMENTS ON CTH T ALTERNATIVES:

BERGEN CREEK: Bergen Creek is a Class II brook trout stream. The creek has extensive adjoining wetlands and a mapped floodplain associated with it. Both alternatives we are reviewing show that the exit ramp on southbound USH 53 at CTH T could be constructed within a riparian wetland and a portion of the mapped floodplain of

Bergen Creek. If this ramp is proposed to be constructed within the floodplain, it may be necessary to conduct a study to determine if the ramp would cause an increase in backwater flood elevations. Avoiding this wetland completely could prevent the need for a floodplain study and reduce secondary impacts to the resources associated with Bergen Creek.

Alternative D:

WETLANDS: This alternative would impact a considerably smaller area of the wetland located in the southeast quadrant of the proposed interchange. The wetland in this quadrant appears to be a higher quality wet meadow and is part of a larger wetland complex that is bisected by USH 53.

WILD RIVERS STATE TRAIL AND RAILROAD RIGHT-OF-WAY: The Wild Rivers State Trail is located between the City of Rice Lake in Barron County and the City of Superior in Douglas County and is an active Rails-to-Trails route. As previously discussed, we request that any new crossings of the Wild Rivers Trail (WRT) are constructed as separated grade crossings that span the entire trail and railroad right-of-way (ROW).

Deam's Rockcress and Prairie Sagebrush, which are plants of special concern in Wisconsin, have both been previously surveyed along portions of the WRT. Construction of separated grade crossings that span the entire ROW of the trail would avoid impacts to these plant populations.

This portion of the WRT is currently owned by the DNR. An easement would need to be obtained by our department to construct a new crossing of the trail. It appears that Alternative D would offer an opportunity to use an old road bed on the east side of USH 53 that is high enough in elevation to build a separated grade crossing of the WRT. This would provide more protection for users of the WRT and also protect the integrity of the federally granted right-of-way, which cannot be used for any purposes other than recreational trails.

Alternative E:

WETLANDS: This alternative would impact a considerably larger area of the wetland located in the southeast quadrant of the proposed interchange. It appears that the northern portion of this wetland could be completely obliterated by the proposed loop ramp.

At this time, we do not have sufficient information to identify a preferred alternative. We will complete our review process after we have received the additional information requested. We thank you for the opportunity to comment on the preservation study. If you have any questions regarding this letter or the information we have requested, please feel free to contact me here in our Spooner office at (715) 635-4229.

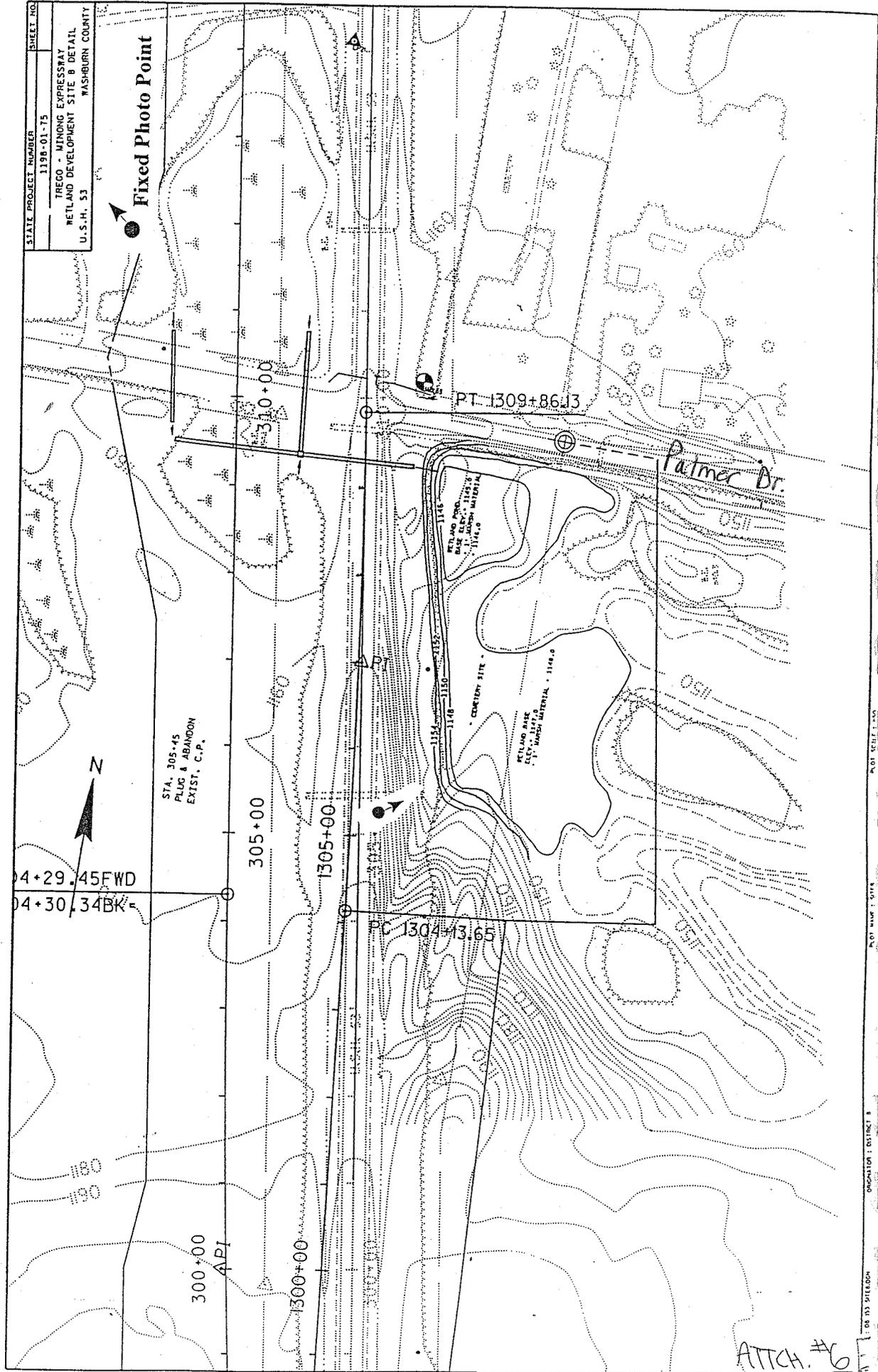
Sincerely,

Amy Cronk

Amy Cronk
Environmental Review Coordinator

cc: Terry Jordan - Spooner
Tim Miller - Ladysmith
Todd Polum, SRF Consulting Group, Inc.
Jason Berkner, ACOE – Hayward
Amy Adrihan, DOT – Superior

STATE PROJECT NUMBER	SHEET NO.
119B-01-75	
TREGO - MINONG EXPRESSWAY	
PETLAND DEVELOPMENT SITE B DETAIL	
U.S.H. 53 WASHINGTON COUNTY	

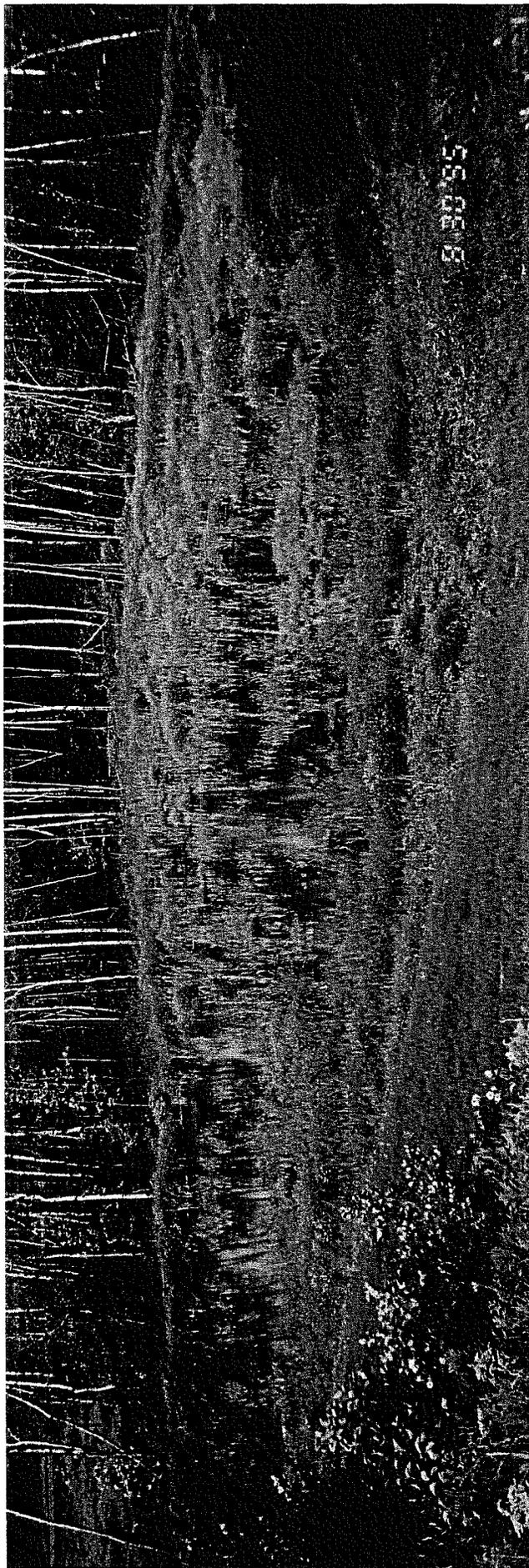


ATTCH. #6

08 03 SITE804 ORIGINAL DETAIL 8 NOT SCALE 1/4" = 1' 1/2" 1/4" = 1' 1/2" 1/4" = 1' 1/2"



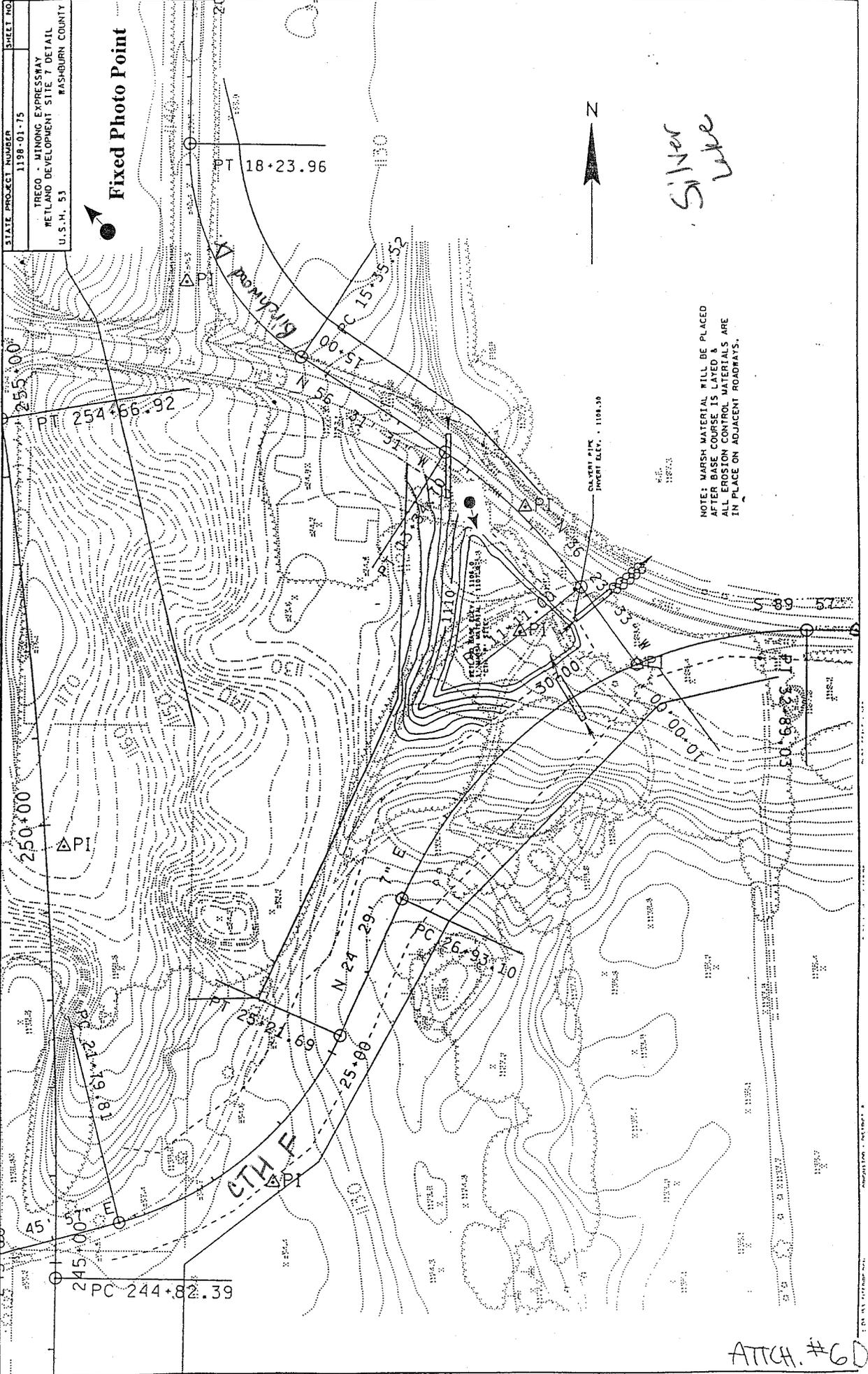
PHOTOGRAPH 10: Cemetery Site. Post-construction, Pregrowing Season. Looking southeast away from Hwy 53.



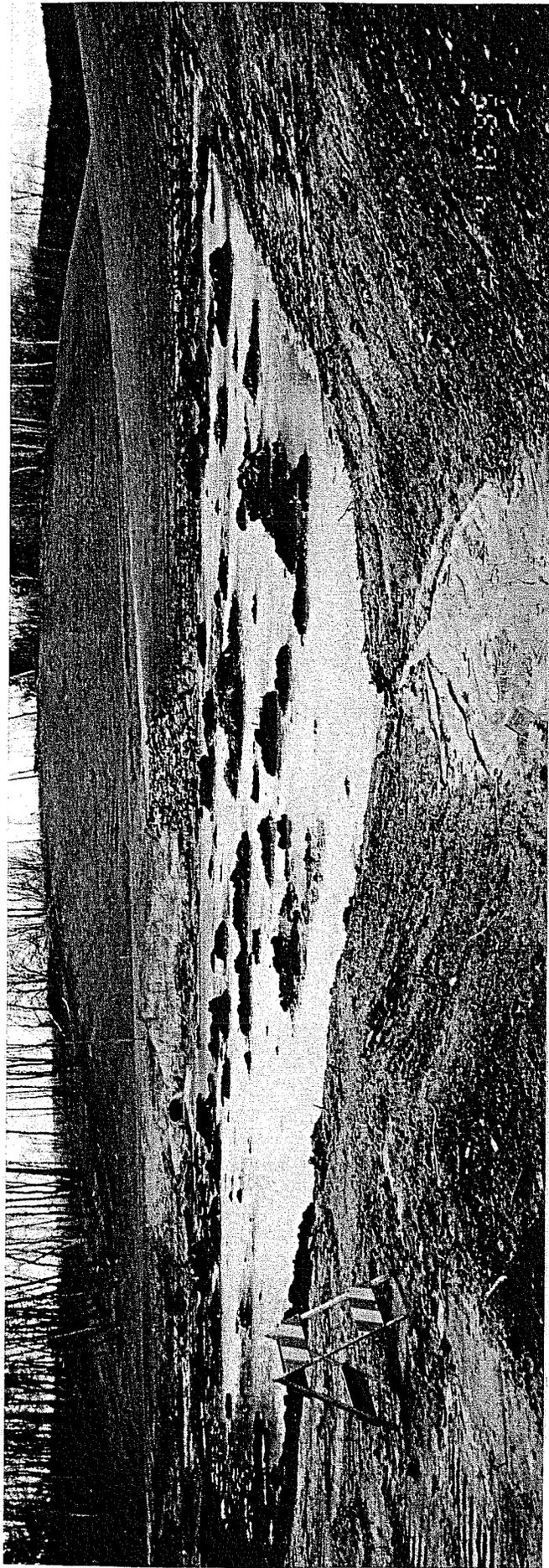
PHOTOGRAPH 11: Cemetery Site. Post-growing Season. Looking southeast away

STATE PROJECT NUMBER	1198-01-75
SHEET NO.	
TREGO - MINONG EXPRESSWAY	
PITLAND DEVELOPMENT SITE 7 DETAIL	
WASHBURN COUNTY	
U.S.H. 53	

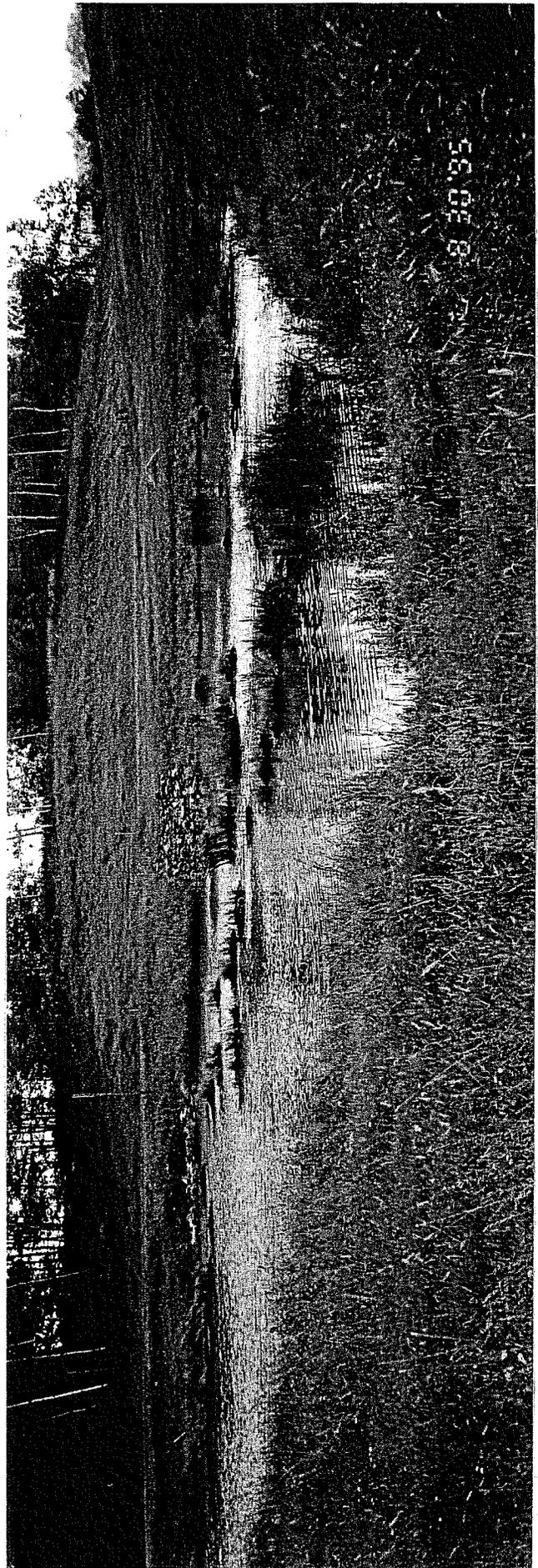
Fixed Photo Point



ATTCH. #60



PHOTOGRAPH 8: CTH F Site. Post-construction, Pregrowing Season. Looking southwest away from Hwy 53.



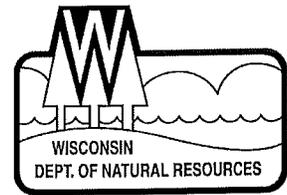
PHOTOGRAPH 9: CTH F Site. Post-growing Season. Looking southwest away from Hwy 53



PHOTOGRAPH 6: Stone House Site. Post-construction, Pregrowing Season. Looking north along Hwy 53.



PHOTOGRAPH 7: Stone House Site. Post-growing season. Looking north along Hwy 53.



December 5, 2011

Marc Bowker
WisDOT Northwest Region
W7102 Green Valley Rd.
Spooner, WI 54801

RE: DOT ID# 1195-01-00
USH 53 Corridor Study Preferred Alternative Comments
Minong Area

Dear Marc:

The purpose of this letter is to relay our comments regarding the preferred alternatives for the above referenced project. We have reviewed the information for the corridor study and have the following comments:

County F at Lampson

Silver Lake - It appears that there could be an opportunity to relocate CTH F further to the south of Silver Lake. Removing this portion of the roadbed could restore historic lakebed, riparian wetlands, mapped floodplain and a vegetated buffer zone. Restoring these areas could increase stormwater infiltration from impervious surfaces, protect the water quality of Silver Lake, and restore important fish and wildlife habitat in littoral shoreline areas. We are requesting DOT to seriously consider the option to realign CTH F further south of Silver Lake and to provide us with further documentation on this issue.

It is not clear at this time if the preferred alternative would require additional fill to be placed in Silver Lake. However, it does appear that if CTH F were to stay on the current alignment it would need to be widened. If the widening occurred on the south side of CTH F it could cause disturbance to the steep vegetated hillside on the southeast bay and potentially expose the lake to sedimentation. If additional lakebed or riparian wetland fill would be required, our agency would not agree to this concept since other feasible alternatives currently exist.

Roadbed Removals - Old roadbeds should be completely removed and restored to original topography. Opportunities for wetland restoration and/or mapped floodplain restoration exist in roadbed removal areas near the lake and should be pursued.

Stormwater Management - Due to the amount of grading associated with this alternative, DOT will be required to develop and submit a stormwater management plan that addresses the post-construction performance standards of TRANS 401. One of these standards includes maintaining at least a 50-foot vegetative buffer around wetlands. This buffer should be maintained at the wetland on CTH F on the far west end of the project.

Wetland Avoidance - In addition to maintaining vegetated buffer zones, all efforts must be made to avoid and minimize impacts to wetlands within the project area. If opportunities exist that would avoid impacts to the wetland located on the west side of the current Birchwood Drive/CTH F intersection, they must be explored, and that documentation should be provided to us. For example, if the proposed intersection could be located slightly further to the west, perhaps wetland impacts could be avoided or

greatly minimized. This wetland was originally created as part of the "Trego Five" wetlands for the USH 53 four-lane expansion in the 1990's. However, DOT did not receive mitigation credits for these areas so this wetland will be subject to avoid/minimize measures.

STH 77 at Minong

Stormwater Management - Due to the amount of grading associated with this alternative, DOT will be required to develop and submit a stormwater management plan that addresses the post-construction performance standards of TRANS 401. Please note that one of these standards is to maintain at least a 50-foot vegetated buffer around existing wetlands.

Shell Creek - This alternative could potentially include altering the structure at Shell Creek. This structure is located slightly upstream of Class I brook and brown trout water. If this culvert is to be replaced, widened, or altered in any way, cold water timing restrictions will apply. In addition, this crossing is located in a mapped floodplain, so if the structure is altered or fill material is placed in the floodplain, a hydraulic and hydrologic analysis may need to be conducted.

Roadbed Removals - Old roadbeds should be completely removed and restored to original topography. If opportunities for wetland restoration and/or mapped floodplain restoration exist in roadbed removal areas they should be pursued.

CTH T at Wascott

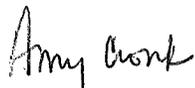
Stormwater Management - Due to the amount of grading associated with this alternative, DOT will be required to develop and submit a stormwater management plan that addresses the post-construction performance standards of TRANS 401. Please note that one of these standards is to maintain at least a 50-foot vegetated buffer around existing wetlands.

Wetland Avoidance - On the west side of USH 53, there is a large spruce/tamarack bog wetland that is located on the south side of "T3". It appears that fill would be placed in this wetland due to the location of the new alignment of CTH T. Please pursue options that would push the road alignment further to the north to avoid placing fill in this wetland.

Roadbed Removals - Old roadbeds should be completely removed and restored to original topography. Opportunities for wetland restoration and/or mapped floodplain restoration exist in roadbed removal areas they should be pursued.

We appreciate the efforts that have been made to avoid and minimize impacts to wetlands and other sensitive resources. Thank you for the opportunity to comment on the preferred alternatives for this corridor study. If you have any questions regarding this letter, please feel free to contact me at (715) 635-4229.

Sincerely,



Amy Cronk
Environmental Review Coordinator

cc: Amy Adrihan, WisDOT Northwest Region
Bill Sande, ACOE – Hayward
Jason Berkner, ACOE – Hayward



**Division of Transportation
Investment Management**
Bureau of Aeronautics
PO Box 7914
MADISON WI 53707-7914

Jim Doyle, Governor
Frank J. Busalacchi, Secretary
Internet: dot.wisconsin.gov

Telephone: 608-267-5018
FAX: 608-267-6748
E-mail: gary.dickers@dot.state.wi.us

8 APRIL 2008

MARC BOWKER
PROJECT MANAGER
WISDOT-NORTHWEST/SPOONER
7102 GREEN VALLEY ROAD
SPOONER WI 54801

Subject: Reconstruct USH 53 from CTH F to CTH Y, Washburn and Douglas Counties
Reference: Your letter, 28-Mar-08, Same Subject

Dear Mr Bowker,

We have completed an aeronautic review of your proposal for rehabilitating USH 53 from CTH F in the Town of Brooklyn, Washburn County to CTH Y, in the Town of Gordon, Douglas County.

At its closest your project will be 4.06 statute miles from the *Solon Springs Airport* (OLG).

We have no aeronautical objections or airspace concerns about this project, but I will also run your proposal past our environmental coordinator Jerry Kelly to see if he'd like to add anything.

Please call me at 608-267-5018 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Gary L. Dickers".

Gary L. Dickers
Airspace Manager

Info: Troy Staplemann, WisDOT Northwest Environmental Coordinator



**Division of Transportation
System Development**
Northwest Region – Spooner Office
7102 GREEN VALLEY ROAD
Spooner, WI 54801

Jim Doyle, Governor
Frank J. Busalacchi, Secretary
Internet: www.dot.wisconsin.gov

Telephone: (715) 635.4975
Facsimile (FAX): (715) 392.7863
E-mail: superior.dtd@dot.state.wi.us

March 27, 2008

Peter Nauth

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION (DATCP)
Agricultural Impact Program
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 54708-8911

Dear Mr. Nauth:

The Wisconsin Department of Transportation (WisDOT) is in the process of developing official mapping and environmental documentation for a proposed project located along USH 53, extending approximately 18.5 miles, from CTH F in the town of Brooklyn to CTH Y in the town of Gordon in Washburn and Douglas Counties, Wisconsin. Communities in the study area are the towns of Brooklyn, Minong, Wascott, Gordon and the Village of Minong. The project will consist of replacing selected at-grade intersections with interchanges, grade separations and cul-de-sacs, where appropriate. The goal for this project is to officially map the selected segments and preserve the corridor as an expressway.

As part of the agency/utility coordination and environmental review process, we are requesting information from your agency in determining the effect expressway enhancements and associated access changes could have on agricultural and other critical resources managed by the DATCP.

The area of potential impact could include anything within the study area (refer to the enclosed map). Please review the enclosed project location map and report any findings or concerns located within a 2000' wide corridor along USH 53. We would appreciate your submitting your concerns and comments in writing by **Monday, April 21**. If further coordination is needed, please provide us with the appropriate contact person and outline the necessary procedures to follow.

If you would like to discuss this project in person, we would be happy to meet with you. Please do not hesitate to contact me with any questions, or if you wish to discuss this project in further detail. Thank you in advance for your cooperation. Please contact me at:

Marc Bowker, WisDOT Project Manager, 7102 Green Valley Road, Spooner, WI 54801
(phone 715-225-9306).

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Bowker".

Marc Bowker
WisDOT Project Manager

Cc: Troy Stapelmann, NW Region Environmental Coordinator
Todd Polum, Consultant Project Manager

Attachment: Project Location Map

Gary Dikkers, Airspace Manager
WISDOT BUREAU OF AERONAUTICS
Room 701
P.O. Box 7914
Madison, WI 53707-7914

Peter Nauth
DATCP
Agricultural Impact Program
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 54708-8911

Gary Haughn, District Conservationist
U.S.D.A. NATURAL RESOURCES CONSERVATION
SERVICE (NRCS)
Ashland Service Center
2014 3rd Street West
Ashland, WI 54806

Jason Berkner, Project Manager
U.S. ARMY CORPS OF ENGINEERS
15954 Rivers Edge, Suite 240
Hayward, WI 54843

Kenneth Westlake
U.S. ENVIRONMENTAL PROTECTION AGENCY
77 West Jackson Boulevard
Chicago, IL 60604-3507

Louise Clemency, Field Supervisor
US FISH AND WILDLIFE SERVICE
Green Bay Ecological Services Office
2661 Scott Tower Drive
New Franken, WI 54229

Thomas Fredrickson, District Conservationist
U.S.D.A. NATURAL RESOURCES CONSERVATION
SERVICE (NRCS)
Spooner Service Center
800 N. Front Street, Room 103
Spooner, WI 54801-1350

Amy Cronk, Transportation Liaison
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
810 West Maple Street
Spooner, WI 54801

Jill Utrup
U.S. FISH AND WILDLIFE SERVICE
Wisconsin Ecological Services Office
2661 Scott Tower Drive
New Franken, Wisconsin 54229-9565



**Division of Transportation
System Development**
Northwest Region – Spooner Office
7102 Green Valley Road
Spooner, WI 54801



You're Invited!



Corridor Preservation

Minong Area

Local Officials Meeting
Thursday, November 8, 2:30 to 4:30 pm
Minong Village Hall
123 5th Avenue
Minong, WI 54859

Public Information Meeting
Thursday, November 8, 5:00 to 7:00 pm
Minong Village Hall
123 5th Avenue
Minong, WI 54859



**Division of Transportation
System Development**
Northwest Region – Spooner Office
W7102 Green Valley Road
Spooner, WI 54801

Jim Doyle, Governor
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Internet: www.dot.wisconsin.gov

Telephone: 715-392-7925
Toll Free: 800-590-1868
Facsimile (FAX): 715-635-5016
E-mail: superior.dtd@dot.state.wi.us

October 22, 2007

Dear Local Official:

The Wisconsin Department of Transportation (WisDOT) plans to study the US 53 corridor from 0.75 mile north of Schnagl Rd. in Washburn County to the Wascott/Gordon Town line in Douglas County, a distance of approximately 20 miles.

You are invited to attend *BOTH* of the following meetings:

Local Officials Meeting

Thursday, November 8, 1:30 pm

Minong Village Hall
123 5th Avenue
Minong, WI 54859

Public Information Meeting

Thursday, November 8, 5:00 to 7:00 pm
(Short presentation at 5:30 pm)

Minong Village Hall
123 5th Avenue
Minong, WI 54859

The purpose of the study is to develop a long-term vision for the corridor that will be preserved through officially mapping right-of-way needed for a freeway/expressway conversion. Improvements needed as part of a freeway/expressway conversion could include interchanges in strategic locations, new overpasses & cul-de-sacs and development of a local transportation network to safely balance the access and mobility needs of the area. A Frequently Asked Questions (FAQ) sheet is included with this letter that provides more detail about the study.

The purpose of the meetings are to introduce and provide information about the study and obtain input on transportation and interchange location issues to US 53. Maps of existing conditions will be on display and attendees will be given the opportunity to provide written or verbal comments. WisDOT staff will be on hand to answer questions.

If you have any questions about the study please contact either:

Marc Bowker
WisDOT Project Manager
(715) 635-4975
marc.bowker@dot.state.wi.us

Todd Polum
SRF Project Manager
(866) 877-0773
tpolum@srfconsulting.com

Thank you,

Marc Bowker
WisDOT Project Manager

Enclosure

Mr. Michael Bobin
Washburn County District 1
P.O. Box 462
Minong, WI 54859

Ms. Darlene E. Smith, Clerk
Town of Brooklyn
W6032 Oakridge Drive
Trego, WI 54888

Mr. Eugene Barrett
Washburn County District 2
W9499 Bear Track Road
Minong, WI 54859

Mr. Gerald H. Schneider, Chairperson
Town of Chicog
W9036 Webb Creek Drive
Trego, WI 54888

Mr. Michael Waggoner
Washburn County District 3
W4660, Hwy 77
Minong, WI 54859

Ms. Mary M. Anderson, Clerk
Town of Chicog
W8193 Bald Eagle Drive
Trego, WI 54888

Mr. Glenn Wisner
Washburn County District 6
N7547 Wood Drive
Trego, WI 54888

Mr. Douglas Denninger, Chairperson
Town of Frog Creek
W4540 McGregor Road
Minong, WI 54859

Mr. William Allard
Washburn County District 9
N7069 Oak Hill Road
Trego, WI 54888

Ms. Jo A. Denninger, Clerk
Town of Frog Creek
W3936 Frog Creek Road
Minong, WI 54859

Mr. George Graven
Douglas County District 28
8181 East County Road Y
Gordon, WI 54838

Mr. Lester H. Fiedler, Chairperson
Town of Minong
W6520 Crocker Road
Minong, WI 54859

Mr. Gerald L. Graham, Chairperson
Town of Brooklyn
W5833 Palmer Drive
Trego, WI 54888

Ms. Jo A. Denninger, Clerk/Treasurer
Town of Minong
W7095 Nancy Lake Road
Minong, WI 54859

Mr. Gary Campbell, Chairperson
Town of Trego
W6316 County Highway E
Trego, WI 54888

Ms. Barb Norton, Clerk
Town of Trego
W6097 River Road
Trego, WI 54888

Mr. Michael R. Bobin, President
Village of Minong
P.O. Box 462
Minong, WI 54859

Ms. Karen L. Baker, Trustee
Village of Minong
715 Wallace Street
Minong, WI 54859

Mr. Andy Podratz, Trustee
Village of Minong
111 Bond Avenue
Minong, WI 54859

Mr. Harold W. Sutherland, Trustee
Village of Minong
P.O. Box 124
Minong, WI 54859

Mr. Lloyd Wallace, Trustee
Village of Minong
P.O. Box 245
Minong, WI 54859

Mr. David L. Wilcox, Trustee
Village of Minong
P.O. Box 135
Minong, WI 54859

Ms. Darlene Denninger, Clerk/Treasurer
Village of Minong
P.O. Box 8
Minong, WI 54859

Ms. Denise Waggoner, Deputy Clerk/Treasurer
Village of Minong
P.O. Box 8
Minong, WI 54859

Mr. James Gorud, Assessor
Village of Minong
P.O. Box 250
Minong, WI 54859

Mr. Dan D. Myers, Police Chief
Village of Minong
P.O. Box 8
Minong, WI 54859

Mr. John Cosgrove, Chairperson
Town of Gordon
P.O. Box 35
Gordon, WI 54838

Ms. Vickie Eastwood, Clerk
Town of Gordon
P.O. Box 68
Gordon, WI 54838

Mr. Bernard Bergman, Chairperson
Town of Wascott
P.O. Box 159
Wascott, WI 54890

Ms. Val Bremanis, Clerk/Treasurer
Town of Wascott
P.O. Box. 159
Wascott, WI 54890

Tom Kerr
USFWS
1764 95th Street
New Richmond, WI 54017

Dale Bast
USFWS
10325 Fairview Road
Iron River, WI 54847

Ashland National & Wildlife Conservation Office
USFWS
2800 Lake Shore Drive East
Ashland, WI 54806

Whittlesey Creek NWR
USFWS
29270 County Highway G
Ashland, WI 54806

US Army Corps of Engineers
Sibley Square at Mears Park
190 5th Street East, Suite 401
St. Paul, MN 55101-1638

Attn: Jason Berkner
Department of the Army Corps of Engineers
15954 Rivers Edge, Suite 240
Hayward, WI 54843

NRCS
Spooner Service Center
800 N. Front Street, Room 103
Spooner, WI 54801-1350

Ashland Service Center
NRCS
2014 3rd Street West
Ashland, WI 54806

Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Attn: Amy Cronk
DNR Northern Region Headquarters
810 W Maple Street
Spooner, WI 54801

WISDOT Division of Transportation Investment
Management
Bureau of Aeronautics
PO Box 7914
Madison, WI 53707-7914

Eau Claire Regional Office
DATCP
3610 Oakwood Hills Parkway
Eau Claire, WI 54701-7754

Wisconsin Historical Society
SHPO
816 State Street
Madison, WI 53706-1417

Northwest Regional Planning Commission
1400 South River Street
Spooner, WI 54801

Washburn County Historical Society
PO Box 366
Shell Lake, WI 54871

Gordon-Wascott Historical Society
15785 S. Newsome Road
Minong, WI 54859

Stone Lake Area Historical Society
PO Box 95
Stone Lake, WI 54876

Douglas County Historical Society
1101 John Avenue
Superior, WI 54880

Minong Police Department
PO Box 8
Minong, WI 54859

Washburn County Sheriff's Office
421 Hwy 63
PO Box 429
Shell Lake, WI 54871

Douglas County Sheriff's Office
1316 N 14th Street Suite 100
Superior, WI 54880

Minong Fire Department
PO Box 351
Minong, WI 54859

CHICOG Fire Department
N11114 CTH F
Trego, WI 54888

Gordon Fire Department
PO Box 178
Gordon, WI 54838

Wascott Fire Department
PO Box 111
Wascott, WI 54890

Minong Area Ambulance Service
123 Fifth Avenue
Minong, WI 54859

North Memorial Ambulance
N4755 Highway 63
Spooner, WI 54801

Gordon-Wascott Emergency Medical Service
14511 S Hwy 53
Gordon, WI 54838

Spooner Area School District
500 College Street
Spooner, WI 54801

Attn: Kevin A. Schoessow
Washburn County - UW Extension
850 W Beaver Brook Avenue, Suite 1
Spooner, WI 54801-9801

Attn: Tom Syverud
Douglas County - UW Extension
1313 Belknap Street
Superior, WI 54880-2781

Washburn County Highway Department
1600 County Highway H
Spooner, WI 54801

Douglas County Highway Department
7417 County Road E
PO Box 174
Hawthorne, WI 54842

Edith Leoso THPO
Bad River Band of Lake Superior
Chippewa Indians of Wisconsin
PO Box 39
Odanah, WI 54861

William Quackenbush THPO
Ho-Chunk Nation
405 Airport Road
PO Box 667
Black River Falls, WI 54615

Jerry Smith THPO
Lac Courte Oreilles Band of Lake Superior
Chippewa Indians of Wisconsin
13394 W Trepania Road
Hayward, WI 54843

Corina, Williams THPO
Oneida Nation of Wisconsin
PO Box 365
Oneida, WI 54155-0365

Scott Doig
Prairie Island Indian Community
Minnesota Mdewakanton Sioux
5636 Sturgeon Lake Road
Welch, MN 55089

Jonathan Buffalo
Sac and Fox of the Mississippi in Iowa
349 Meskwaki Road
Tama, IA 52339-9629

Sandra Massey NAGPRA Rep
Sac and Fox Nation of Oklahoma
RR 2 Box 246
Stroud, OK 74079

Wanda Mcfaggen
St Croix Band Chippewa Indians of Wisconsin
24663 Angeline Avenue
Webster, WI 54893-9246

Mike Alloway
Forest County Potawatomi Community of Wisconsin
PO Box 340
Crandon, WI 54520

Bernadette Huber
Iowa Tribe of Oklahoma
RR 1 Box 721
Perkins, OK 74059

Kely S Jackson-Golly THPO
Lac Du Flambeau Band of Lake Superior
Chippewa Indians of Wisconsin
PO Box 67
Lac Du Flambeau, WI 54538

Zach Pahmahmie
Historic Preservation Officer
Prairie Band of Potawatomi Nation
16281 Q Road
Mayetta, KS 66509

Lisa Bressette THPO
Red Clif Band of Lake Superior
Chippewa Indians of Wisconsin
88385 Pike Road Hwy 13
Bayfield, WI 54814

Deanne Bahr Museum Director
Sac and Fox Nation of Missouri in Kansas and
Nebraska
305 N Mani
Reserve, KS 66434

Cultural Preservation Director
Sokaogon Chippewa Community
Mole Lake Band
3051 Sand Lake Road
Crandon, WI 54520

Sherry White THPO
Stockbridge Munsee Community of Wisconsin
W13447 Camp 14 Road
Bowler, WI 54416

APPENDIX G

Section 106 Review Forms

SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION

Wisconsin Department of Transportation
DT1635 11/2006

SHPO

For instructions, see FDM Chapter 26

I. PROJECT INFORMATION

Project ID 1195-01-00	Highway - Street US 53 at County F US 53 at WIS 77 US 53 at County T	County Washburn County Washburn County Douglas County
Project Termini From 0.75 mile north of Schnagel Road to Wascott/Gordon Town line		Region - Office Northwest Region - Spooner
Regional Project Engineer - Project Manager Marc Bowker		Area Code - Telephone Number (715) 635-4975
Consultant Project Engineer - Project Manager SRF Consulting Group, Inc. - Todd Polum		Area Code - Telephone Number (763) 249-6721
Archaeological Consultant 106 Group Ltd.		Area Code - Telephone Number (651) 290-0977
Architecture/History Consultant 106 Group Ltd.		Area Code - Telephone Number (651) 290-0977
Date of Need October 2011		SHSW #
Return a signed copy of this form to: <i>Marc Bowker, WisDOT NW Region</i>		

II. PROJECT DESCRIPTION

Project Length US 53 at County F: 1.8 miles US 53 at WIS 77: 5.6 miles US 53 at County T: 1.2 miles	Land to be Acquired: Fee Simple US 53 at County F: 20.9 acres US 53 at WIS 77: 46.4 acres US 53 at County T 10.2 acres	Land to be Acquired: Easement 0 acres
--	---	--

Distance as measured from existing centerline	Existing	Proposed	Other Factors	Existing	Proposed
Right-of-Way Width measured from the proposed NB alignment	Varies 25' - 72'	Varies 39' - 100'	Terrace Width	N/A	N/A
Shoulder (width)	Varies 0' - 10'	Varies 2' - 10'	Sidewalk Width US 53 County F WIS 77 County T	N/A N/A 5 feet N/A	N/A N/A 5 feet N/A
Slope Intercept measured from the proposed NB alignment	Varies 15' - 300'	Varies 30' - 220'	Number of Lanes US 53 County F WIS 77 County T	4 2 2 2	4 4 4 4 (see notes 1 and 2 below)
Edge of Pavement measured from the center line of each roadway	Varies 12' - 22"	Varies 18' - 45'	Grade Separated Crossing	None	4 proposed: 1. US 53 at County F 2. US 53 at WIS 77 3. US 53 at Shell Creek Road 4. US 53 at County T
Back of Curb Line US 53 at WIS 77	N/A	18.5'-45.5'	Vision Triangle acres	N/A	N/A
Realignment	N/A	(see notes 3 and 4 below)	Temporary Bypass acres	N/A	0

Other - List:	N/A	N/A	Stream Channel Change	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Attach Map(s) that depict "maximum" impacts.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Tree topping and/or grubbing	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Brief Narrative Project Description - Include all ground disturbing activities. For archaeology, include plan view map indicating the maximum area of ground disturbance and/or new right-of-way, whichever is greater. Include all temporary, limited and permanent easements.

Notes:

- (1) County F and County T are proposed as four-lane roadways over/under US 53, tapering back to the existing two-lane rural section roadway east and west of the local road connections to US 53.
- (2) WIS 77 is proposed as a four-lane roadway between interchange ramp termini over US 53. WIS 77 would taper back and tie in to the existing two-lane rural section roadway east and west of the proposed US 53/WIS 77 interchange.
- (3) East leg of County F realigned 700 feet to north at US 53. West leg of County F realigned 300 feet to the south at US 53.
- (4) County T realigned 800 feet to south at US 53.

See page attached continuation sheet for project description, description of ground disturbing activities and plan view maps.

Add continuation sheet, if needed.

III. CONSULTATION

How has notification of the project been provided to:	<input checked="" type="checkbox"/> Historical Societies/Organizations	<input checked="" type="checkbox"/> Native American Tribes
<input checked="" type="checkbox"/> Property Owners	<input type="checkbox"/> Public Information Meeting Notice	<input type="checkbox"/> Public Info. Mtg. Notice
<input type="checkbox"/> Public Information Meeting Notice	<input checked="" type="checkbox"/> Letter	<input checked="" type="checkbox"/> Letter
<input checked="" type="checkbox"/> Letter - Required for Archaeology	<input type="checkbox"/> Telephone Call	<input type="checkbox"/> Telephone Call
<input type="checkbox"/> Telephone Call	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:		

*Attach one copy of the base letter, list of addresses and comments received. For history include telephone memos as appropriate.

IV. AREA OF POTENTIAL EFFECTS - APE

ARCHAEOLOGY: Area of potential effect for archaeology is the existing and proposed ROW, temporary and permanent easements. Agricultural practices do not constitute a ground disturbance exemption.

HISTORY: Describe the area of potential effects for buildings/structures.

The area of potential effect for history includes all properties within and adjacent to the project area.

V. PHASE I ARCHEOLOGICAL OR RECONNAISSANCE HISTORY SURVEY NEEDED

ARCHAEOLOGY	HISTORY
<input checked="" type="checkbox"/> Archaeological survey is needed	<input checked="" type="checkbox"/> Architecture/History survey is needed
<input type="checkbox"/> Archaeological survey is not needed - Provide justification <input type="checkbox"/> Screening list (date).	<input type="checkbox"/> Architecture/History survey is not needed <input type="checkbox"/> No structures or buildings of any kind within APE <input type="checkbox"/> Screening list (date).

VI. SURVEY COMPLETED

ARCHAEOLOGY	HISTORY
<input checked="" type="checkbox"/> NO archaeological sites(s) identified - ASFR attached	<input type="checkbox"/> NO buildings/structures identified - A/HSF attached
<input type="checkbox"/> NO potentially eligible site(s) in project area - Phase I Report attached	<input checked="" type="checkbox"/> Potentially eligible buildings/structures identified in the APE - A/HSF attached
<input type="checkbox"/> Potentially eligible site(s) identified-Phase I Report attached <input type="checkbox"/> Avoided through redesign <input type="checkbox"/> Phase II conducted - go to VII (Evaluation).	<input type="checkbox"/> Potentially eligible buildings/structures avoided - documentation attached
<input type="checkbox"/> Phase I Report attached - Cemetery/cataloged burial documentation	

VII. DETERMINATION OF ELIGIBILITY (EVALUATION) COMPLETED

<input type="checkbox"/> No arch site(s) eligible for NRHP - Phase II Report attached	<input type="checkbox"/> No buildings/structure(s) eligible for NRHP - DOE attached
<input type="checkbox"/> Arch site(s) eligible for NRHP - Phase II Report attached	<input checked="" type="checkbox"/> Building/structure(s) eligible for NRHP - DOE attached
<input type="checkbox"/> Site(s) eligible for NRHP - DOE attached	

VIII. COMMITMENTS/SPECIAL PROVISIONS – must be included with special provisions language

See attached continuation sheet for commitments/special provisions.

IX. PROJECT DECISION

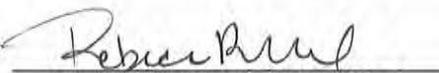
- No historic properties (historical or archaeological) in the APE.
- No historic properties (historical or archaeological) affected.
- Historic properties (historical and/or archaeological) may be affected by project;
 - Go to Step 4: Assess affects and begin consultation on affects
 - Documentation for Determination of No Adverse Effects is included with this form. WIDOT has concluded that this project will have No Adverse Effect on historic properties. Signature by SHPO below indicates SHPO concurrence in the DNAE and concludes the Section 106 Review process for this project.



(Regional Project Manager)

8-31-2011

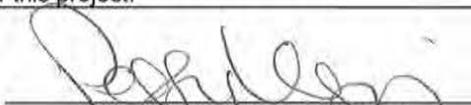
(Date)



(WIDOT Historic Preservation Officer)

5/1/2012

(Date)



(State Historic Preservation Officer)

5/11/2012

(Date)

(Consultant Project Manager)

(Date)

Wisconsin Historical Society
Determination of Eligibility Form

(DOE March 2011)

WisDOT Project ID #: 1195-01-00

WHS #: _____

Property Name(s): Lampson School / Brooklyn Township Hall

Address/Location: N9689 Birchwood Drive

City & County: Town of Brooklyn, Washburn County Zip Code: 54888

Town: 40N Range: 12W Section: 2

Date of Construction: 1903

WisDOT Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this request for Determination of Eligibility:

- Meets the National Register of Historic Places criteria.
- Does not meet the National Register of Historic Places criteria.

Rebecca Burkel

5/1/2012

Rebecca Burkel, WisDOT Historic Preservation Officer

Date

State Historic Preservation Office

In my opinion, the property:

- Meets the National Register of Historic Places criteria. at Local Level only.
- Does not meet the National Register of Historic Places criteria.

Michael E. Stevens

5/11/12

Michael E. Stevens, State Historic Preservation Officer

Date

Comments (FOR AGENCY USE ONLY):

Agree w/eligibility but only at local level. 2/5/12 - 5/1/12

Division of Historic Preservation
Wisconsin Historical Society
816 State Street
Madison, WI 53706

SECTION 106 REVIEW

ARCHAEOLOGICAL/HISTORICAL INFORMATION

Wisconsin Department of Transportation
DT1635 11/2006

II. PROJECT DESCRIPTION

Brief Project Description

The project area is located in Washburn and Douglas counties as illustrated in the attached Figure 1. The proposed USH 53 Corridor Preservation, Minong Area Project consists of grade-separation improvements at three locations, as shown in the attached Figure 2:

1. County Trunk Highway (County) F (Town of Brooklyn)
2. State Trunk Highway (WIS) 77 (Village of Minong)
3. County T (Town of Wascott)

The Wisconsin Department of Transportation (WisDOT) will pursue official mapping and preservation of the corridor as an expressway through Wisconsin State Statute 84.295. There are no immediate project or construction dollars programmed for this portion of the US 53 corridor. The proposed action will be used as a long-term management strategy so that when funding becomes available, improvements can be phased incrementally, and a comprehensive approach can be applied to the project corridor.

US 53 at County F

Preferred Alternative – “Jug Handle” configuration

Under the proposed project, the existing County F intersections with US 53 will be closed. County F will be reconstructed as a continuous roadway across US 53. The east leg of County F will be realigned approximately 700 feet north of its existing intersection with US 53. The west leg of County F will be realigned approximately 300 feet to the south of its existing intersection with US 53. County F will be reconstructed as an underpass under US 53, with right-in, right-out access on the west and east sides of US 53 (i.e., “Jug Handle” configuration). Two new bridge structures will be constructed on northbound and southbound US 53 at the proposed County F underpass alignment. The northbound and southbound US 53 bridges will be approximately 200 feet long.

West of US 53, a new two-lane local entrance/exit roadway connects southbound US 53 and County F, forming an arc southwest of the new underpass. East of US 53, a new two-lane local entrance/exit roadway connects northbound US 53 to County F, intersecting with Birchwood Drive. The Preferred Alternative removes the existing crossovers and turn lanes north and south of the new County F underpass. Access to residential properties west of US 53 and south of

County F will be replaced with a south frontage road that adjoins the roadway that connects US 53 with County F.

Turn lanes will be added to northbound and southbound US 53 providing right-in right-out access at County F. The northbound and southbound US 53 right turn lanes will be approximately 500 feet in length. Improvements to County F will extend approximately 1,800 feet to the west and east of US 53. The vertical distance between the underpass and the top of the existing US 53 bridge is 22.5 feet (5.5-foot bridge depth plus 17 feet of clearance between the bottom of the structure and County F).

US 53 at WIS 77

Preferred Alternative – Folded Diamond with Loop in SW Quadrant

The Folded Diamond with Loop includes backage roads on the west and east sides of US 53. On the west side, Newton Drive will require new access to WIS 77 because of its close proximity to the proposed interchange. Access to WIS 77 would be provided via a backage road that begins near the southern terminus of Newton Drive and runs west and then north to connect to WIS 77. On the east side of US 53, a backage road will be constructed that runs north of Industrial Drive, crosses WIS 77, then travels westward to provide access to properties that will no longer have direct access to WIS 77 because of their proximity to the interchange. The preferred alternative also includes an overpass connecting Shell Creek Road and Business Route 53 to improve access and mobility. The overpass provides an alternative crossing for emergency vehicles that serve the area to the west. Multiple access points to the north and south of the new interchange would be closed. The attached WIS 77 figures indicate the locations of access closures and proposed cul de sac construction.

The height of the WIS 77 bridge over US 53, including the bridge deck, is 24.1 feet (7.1-foot bridge depth plus 17 feet of clearance between the bottom of the structure and US 53). The height of the Shell Creek Road overpass is approximately 22.5 feet (5.5-foot bridge depth plus 17 feet of clearance between the bottom of the structure and US 53).

US 53 at County T

Preferred Alternative – “Jug Handle” configuration

Under the proposed project, County T will be reconstructed as an overpass across US 53. County T will be realigned approximately 800 feet to the south of its existing intersection location with US 53. A new, local entrance/exit local roadway west of US 53 would provide right-in/right-out access to southbound US 53. East of US 53, the proposed County T alignment would intersect with Town Hall Road. Town Hall Road, along with Red Lake Drive, would provide right-in/right-out access to northbound US 53 from proposed County T. The Preferred Alternative changes access by closing the median of the existing County T at-grade intersection with US 53.

The height of the County T bridge over USH 53, including the bridge deck, is approximately 22.5 feet (5.5-foot bridge depth plus 17 feet of clearance between the bottom of the structure and US 53). Improvements to County T will extend approximately 2,700 feet to the west and approximately 750 feet to the east of US 53.

Ground Disturbing Activities

Ground disturbing activities associated with future construction of the action includes:

- Grading to accommodate the proposed grade separation and local road connections at US 53 and County F.
- Grading to accommodate the proposed interchange and local access road connections at US 53 and WIS 77.
- Grading to accommodate the proposed Shell Creek Road overpass over US 53 north of the Village of Minong.
- Grading to accommodate the proposed realignment of County T and the proposed grade separation at US 53 and County T.
- Grading to accommodate stormwater management features (e.g., infiltration basins, wet detention basins). Specific best management practices (BMPs) for treating and attenuating stormwater runoff will be indentified in the future with final design activities based on TRANS 401 requirements and rules and regulations in place at that time.

The attached overview maps and overview plan sheets (including preliminary slope-intercept limits) illustrate the proposed County F grade separation at US 53, WIS 77 interchange at US 53 and County T grade separation at US 53.

III. CONSULTATION

Historical Societies/Organizations

List of addresses (see attached base letter).

Douglas County Historical Society Attn: Kathy Laakso, Director 1101 John Avenue Superior, WI 54880	Stone Lake Area Historical Society Attn: Rose Rhea, Society President 6064 Stone Lake Road Stone Lake, WI 54876
Gordon-Wascott Historical Society Attn: Maxine Sawyer PO Box 222 9672E County Highway Y Gordon, WI 54838	Washburn County Historical Society Attn: Joyce Ripley, Society President PO Box 366 Shell Lake, WI 54871

Native American Tribes

List of addresses (see attached base letters).

Bad River Band of Lake Superior Chippewa Indians of Wis. Attn: Edith Leoso, THPO PO Box 39 Odanah, WI 54861	Menominee Indian Tribe of Wisconsin Attn: David Grignon, THPO PO Box 910 Keshena, WI 54135	Sac & Fox Nation of Missouri in Kansas and Nebraska Attn: Jane Nioce 205 North Mani Reserve, KS 66434
Forest County Potawatomi Community of Wisconsin Attn: Mike Alloway PO Box 340 Crandon, WI 54520	Oneida Nation of WI Attn: Corina Williams, THPO PO Box 365 Oneida, WI 54155-0365	Sac & Fox Nation of Oklahoma Attn: Sandra Massey, NAGPRA Representative RR2 Box 246 Stroud, OK 74079
Ho-Chunk Nation Attn: William Quackenbush, THPO PO Box 667 405 Airport Road Black River Falls, WI 54615	Prairie Island Indian Community Minnesota Mdewakanton Sioux Attn: Scott Doig 5636 Sturgeon Lake Road Welch, MN 55089	St. Croix Band of Lake Superior Chippewa Indians Attn: Wanda McFaggen 24663 Angeline Avenue Webster, WI 54893-9246
Iowa Tribe of Oklahoma Attn: Bernadette Huber RR 1 Box 721 Perkins, OK 74059	Prairie Band Potawatomi Nation Attn: Joseph Hale Jr., NAGPRA Representative 16281 Q Road Mayetta, KS 66509	Sokaogon (Mole Lake) Band of Chippewa Indians Cultural Preservation Director 3051 Sand Lake Road Crandon, WI 54520
Lac Courte Oreilles Band of Lake Superior Chippewa Indians Attn: Jerry Smith, THPO 13394 West Trepania Road Hayward, WI 54843	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin Attn: Larry Balber, THPO 88385 Pike Road, Hwy 13 Bayfield, WI 54814	Stockbridge-Munsee Community of Wisconsin Attn: Sherry White, THPO Tribal Office W13447 Camp 14 Road Bowler, WI 54416
Lac du Flambeau Band of Lake Superior Chippewa Indians of Wis. Attn: Kelly Jackson, THPO PO Box 67 Lac Du Flambeau, WI 54538	Sac & Fox of the Mississippi in Iowa Attn: Jonathan Buffalo 349 Meskwaki Road Tama, IA 52339-9629	

VIII. COMMITMENTS/SPECIAL PROVISIONS – must be included with special provision language

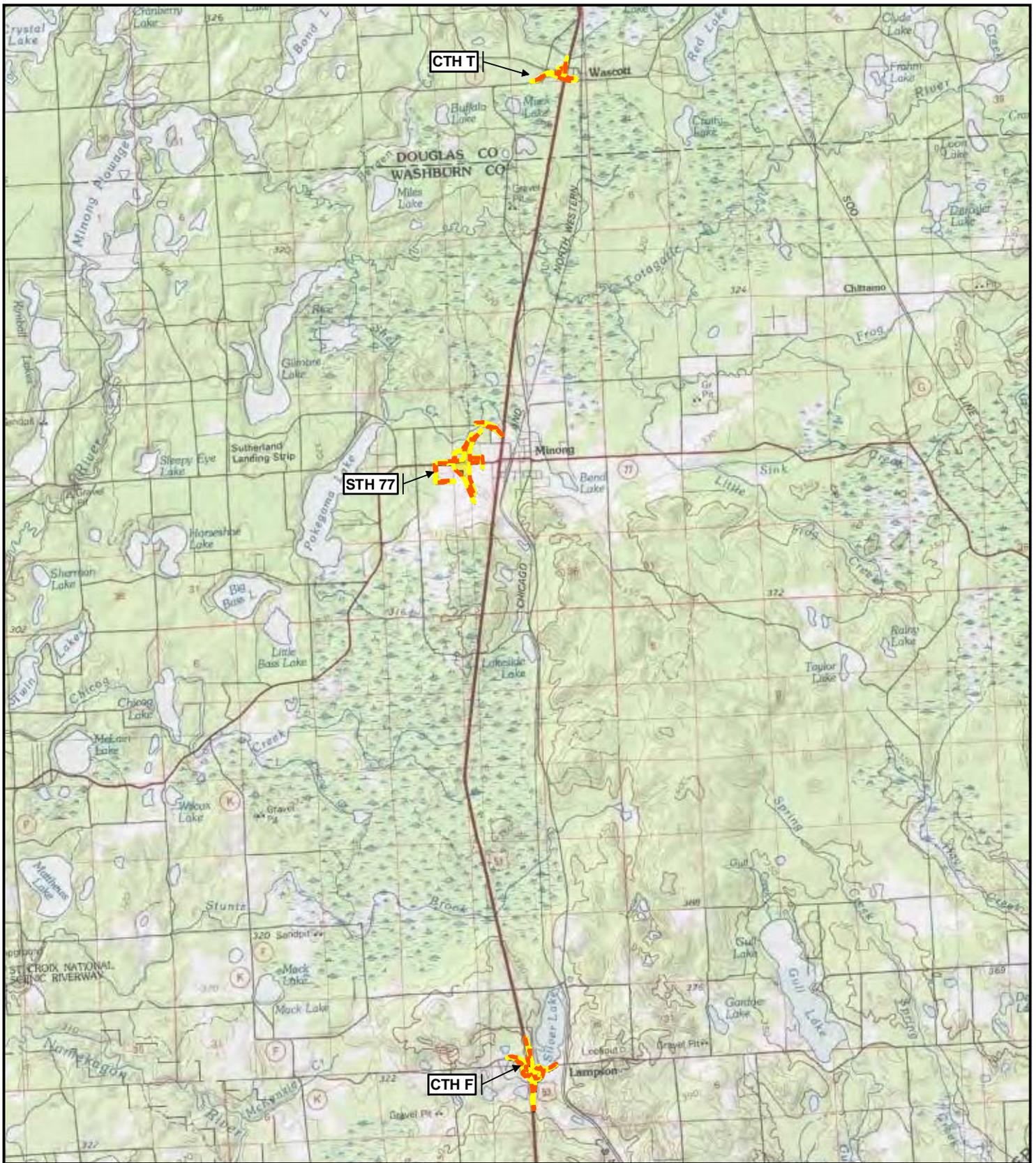
Lampson School/Brooklyn Town Hall

In order to minimize the adverse effect of the proposed project on the setting and feeling of the Lampson School/Brooklyn Town Hall, a row of trees should be maintained between the historic property boundary and County F and Birchwood Drive. If all existing trees must be cleared for construction, then a row of new trees will be planted.

Archaeology

One previously recorded archaeology site, Site # 47WB0084, is located west of US 53 and south of County F, adjacent to the proposed US 53/County F grade separation. The southwest quadrant of the proposed US 53/County F grade separation is characterized by deciduous and coniferous vegetation, as well as areas exhibiting steep slopes. The Wisconsin Historic Preservation Database states that Site # 47WB0084 is a historic dump composed of food and drink containers and food preparation items. Many complete bottles contained the federal warning concerning the resale or reuse indicating that they were produced between 1933 and 1964.

Subsequent to the completion of the archaeological surveys for the project, the proposed County F alignment was redesigned to avoid the Lampson School/Brooklyn Town Hall, east of US 53 and north of County F. The Lampson School/Brooklyn Town Hall is a historic schoolhouse that was determined eligible for the National Register of Historic Places (NRHP). As a result of the County F alignment redesign to avoid the Lampson School/Brooklyn Town Hall, County F preliminary slope-intercept limits may extend into the boundary of Site # 47B0084. Prior to construction of the proposed project, an archaeology survey will also be completed in the southwest quadrant of the County F grade separation if determined necessary.



Source: 7.5 Minute USGS Quadrangles, The 106 Group Ltd.

Map Produced The 106 Group Ltd. - 11/01/10

USH 53 Corridor Preservation, Minong Area
WisDOT Project ID: 1195-01-00
Phase I Archaeological Survey
Douglas and Washburn Counties, Wisconsin

Project Location

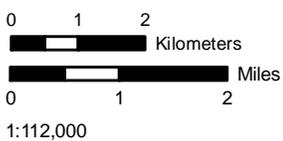
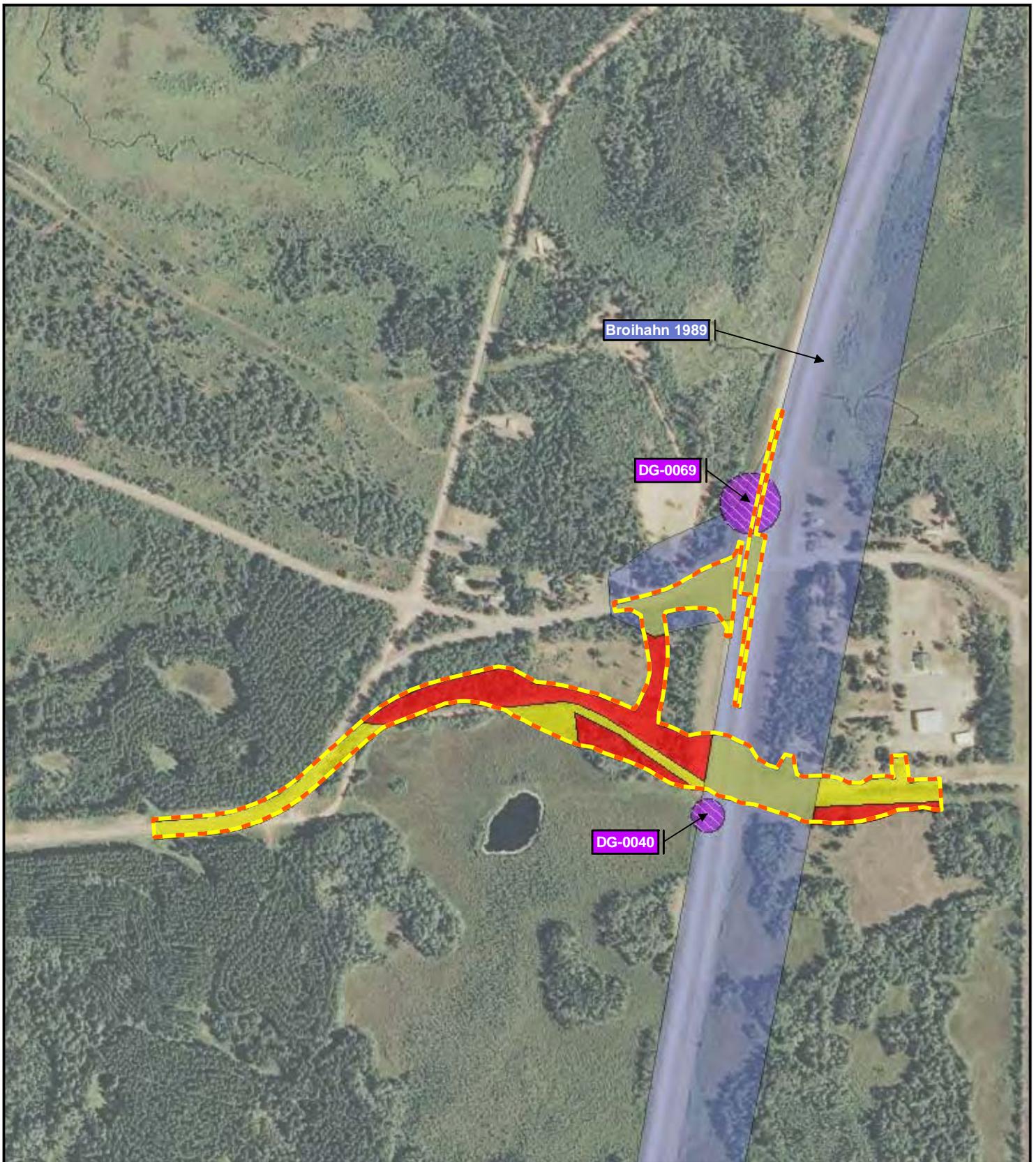


Figure 1



Source: 7.5 Minute USGS Quadrangles, Wisconsin SHPO, The 106 Group Ltd.

Map Produced The 106 Group Ltd. - 11/01/10

USH 53 Corridor Preservation, Minong Area
WisDOT Project ID: 1195-01-00
Phase I Archaeological Survey
Douglas and Washburn Counties, Wisconsin

Archaeological Survey Results - CTH T

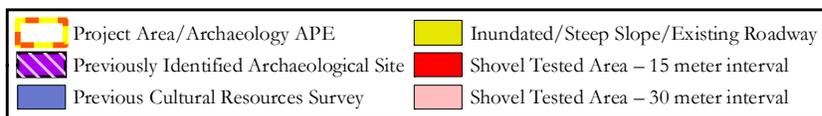
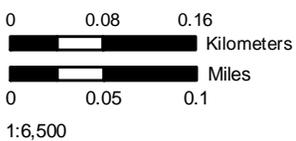
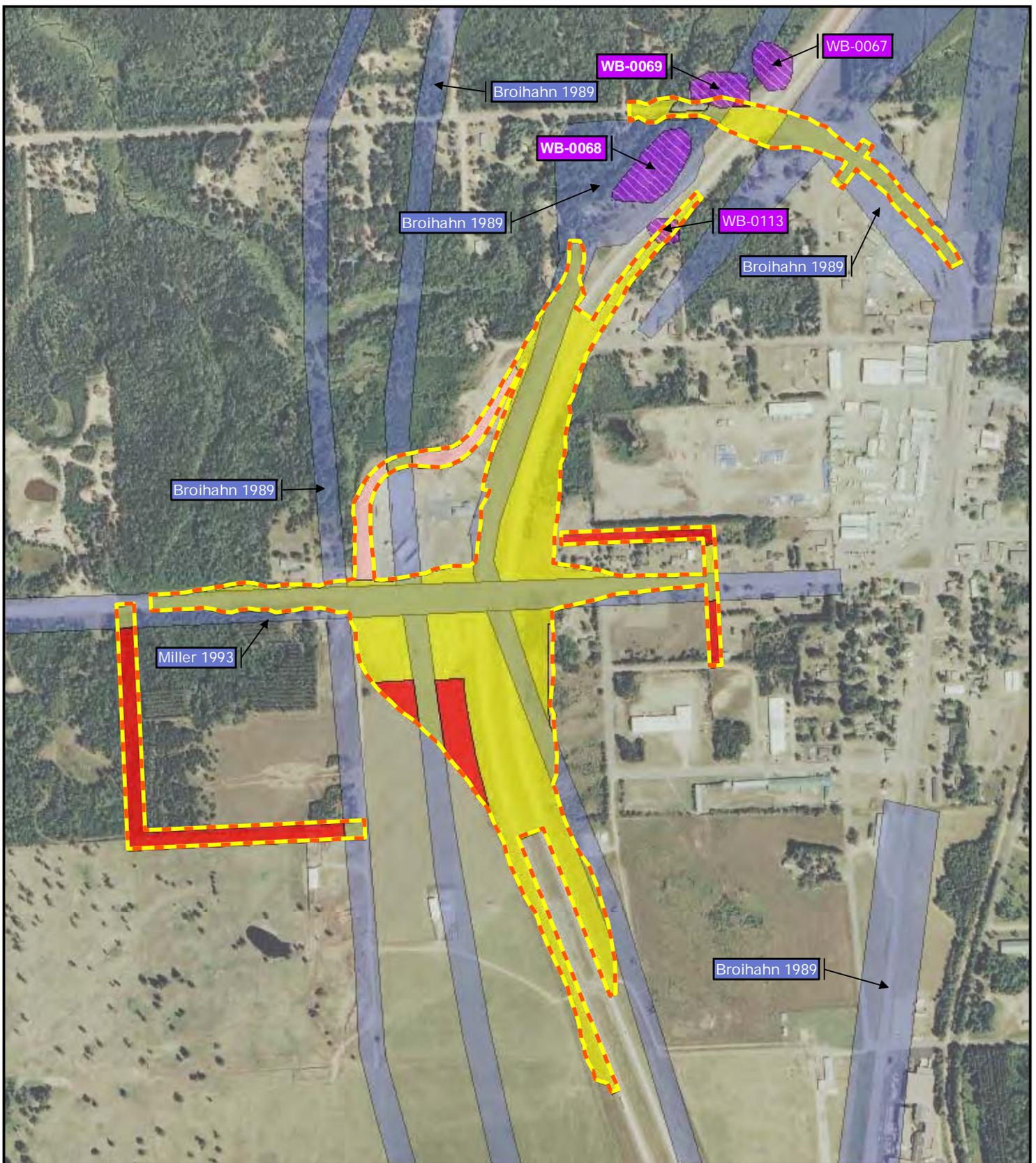


Figure 2



Source: 7.5 Minute USGS Quadrangles, Wisconsin SHPO, The 106 Group Ltd.

Map Produced The 106 Group Ltd. - 11/01/2010

USH 53 Corridor Preservation, Minong Area
WisDOT Project ID: 1195-01-00
Phase I Archaeological Survey
Douglas and Washburn Counties, Wisconsin

Archaeological Survey Results - STH 77

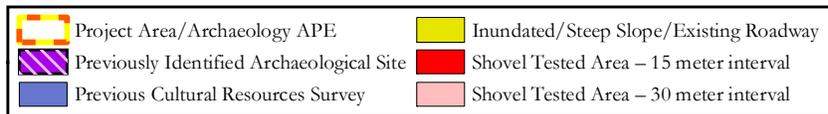
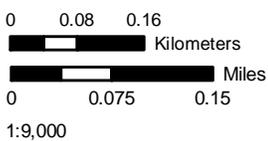
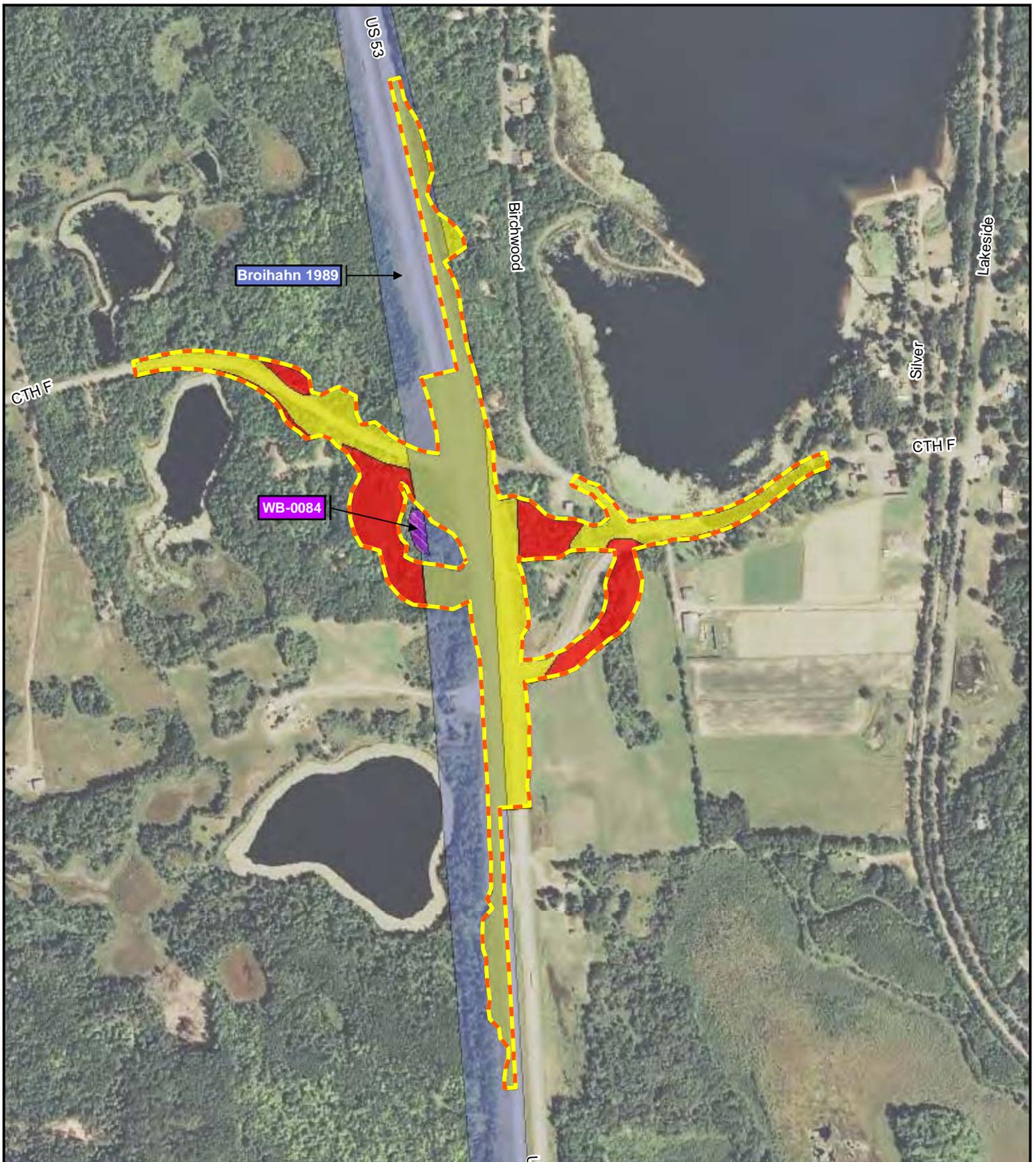


Figure 3



Source: 7.5 Minute USGS Quadrangles, Wisconsin SHPO, The 106 Group Ltd.

Map Produced by The 106 Group Ltd. - 11/01/2010

USH 53 Corridor Preservation, Minong Area
WisDOT Project ID: 1195-01-00
Phase I Archaeological Survey
Douglas and Washburn Counties, Wisconsin

Archaeological Survey Results - CTH F

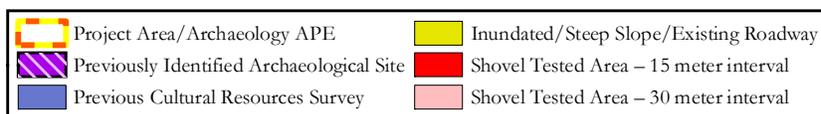
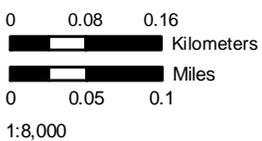


Figure 4

APPENDIX H

Tribal Correspondence

Lac du Flambeau Band of Lake Superior Chippewa Indians

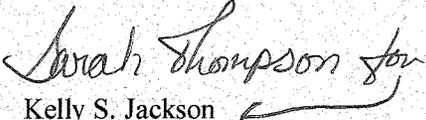
Stockbridge-Munsee Community Band of Mohican Indians

Prairie Band Potawatomi Nation

March 10, 2008

Feel free to contact me at (715) 588-2139 if you have any questions or concerns.

Sincerely,


Kelly S. Jackson
Tribal Historic Preservation Officer

Stockbridge-Munsee Tribal Historic Preservation Office

Sherry White - Tribal Historic Preservation Officer

W13447 Camp 14 Road

P.O. Box 70

Bowler, WI 54416

March 10, 2008

Marc Bowker
Project Manager
Northwest Region – Spooner Office
W7102 Green Valley Rd.
Spooner, WI 54801

RE: WisSOT I.D. #1195-01-00
USH 53 Corridor Preservation, Minong Area
CTH F to CTH Y, Washburn and Douglas Counties

Dear Mr. Bowker:

Thank you for contacting the Stockbridge-Munsee Tribe regarding the above referenced project. The Tribe is committed to protecting archaeological sites that are important to tribal heritage, culture and religion. Furthermore, the Tribe is particularly concerned with archaeological sites that may contain human burial remains and associated funerary objects.

As described in your correspondence, the proposed ground disturbing activity of this project is not in a region of archaeological interest to the Stockbridge-Munsee Tribe. The counties of interest to our tribe in Wisconsin are Shawano, Calumet, and Outagamie.

We appreciate your cooperation in notifying the Historic Preservation Office. Should you have any questions, feel free to contact me.

Sincerely,



Sherry White,
Tribal Historic Preservation Officer

From: Todd Polum
To: Danner, Brett
Date: 4/23/2008 12:32 PM
Subject: Fwd: FW: Project: US 53 Corridor , .75 Mile North of Schnagl Rd, Washburn County

>>> "Bowker, Marc" <marc.bowker@dot.state.wi.us> 4/23/2008 12:28 pm >>>
Please include as correspondence in EA.

-----Original Message-----

From: Linda Yazzie [mailto:LindaY@pbpnation.org]
Sent: Wednesday, April 23, 2008 10:16 AM
To: marc.bowker@dot.state.wi.us
Subject: Project: US 53 Corridor , .75 Mile North of Schnagl Rd, Washburn County
Importance: High

On behalf of Steve Ortiz, Tribal Chairman, of the Prairie Band Potawatomi Nation, I am writing to inform you that we have received your National Historic Preservation Act (NHPAS), Section 106 and Section 100, correspondence for the following project(s):

Project: US 53 Corridor , .75 Mile North of Schnagl Rd, Washburn County

After reviewing the contents of your correspondence, we are unaware of any historical cultural resources in the proposed development area. However, we do request to be immediately contacted if any inadvertent discoveries are uncovered at anytime throughout the various phases of the project.

Please feel free to call our Tribal Chairman, Steve Ortiz at (785) 966-4007, or additional information can be faxed to him at (785) 966-4009. We look forward working with you.

Thank you

Linda Yazzie
Administrative Assistant
for Tribal Chairman
Prairie Band Potawatomi Nation
(785) 966-4008
email: lindayazzie@pbpnation.org

APPENDIX I

Indirect and Cumulative Effects Analysis

**Indirect and Cumulative Effects
Prescreening Analysis
US 53 Corridor Preservation, Minong Area (County F to County T)
Washburn and Douglas Counties, Wisconsin
WisDOT Project ID 1195-01-00**

Project Description

An Environmental Assessment is being prepared to evaluate the potential impacts of preserving the corridor along US 53 in the Minong Area. Preservation of this existing rural arterial would identify and preserve future locations for access changes and local circulation along the corridor.

US 53 is part of the Wisconsin Department of Transportation (WisDOT) *Corridors 2020 Plan* and *Connections 2030 Plan*. The *Corridors 2020 Plan* identifies this highway as a “Backbone” route between the Duluth/Superior area on the Minnesota/Wisconsin border and Interstate 94 in Eau Claire, Wisconsin. “Backbone” routes connect major population and economic centers and provide economic links to national and international markets. As a principal arterial highway, US 53 functions as a high mobility roadway, connecting southern Wisconsin and northern Illinois to the Duluth/Superior area, the ports of Lake Superior, and northern Minnesota and western Canada.

The segment of US 53 from Eau Claire to Duluth/Superior is also designated as the Peace Memorial Corridor and is part of the WisDOT *Connections 2030 Plan*. The WisDOT *Connections 2030 Plan* identifies multimodal corridors throughout the state. The multimodal corridors build upon the backbone system and connector system identified in the *Corridors 2020 Plan*. According to the *Connections 2030 Plan*, these multimodal corridors are critical in serving the travel patterns throughout the state and in supporting the state’s economy. The corridor is also part of an important north-south tourist and recreation route.

The Proposed Action would officially map the areas where County F, WIS 77, and County T intersect US 53 and preserve the corridor as an expressway via the process established in Wisconsin State Statutes (Wis. Stats. 84.295). The statute includes long-term planning, official mapping, and preservation tools available to the WisDOT to help protect and preserve ROW for future transportation needs. This proactive tool allows WisDOT to address safety, operation, and mobility/capacity issues in advance of impending long-term needs. The proposed action does not include ROW acquisition, has no funding for construction, and would need to be re-evaluated prior to construction.

The proposed action would involve grade separation improvements along US 53 at County F (“jug-handle” configuration), WIS 77 (Folded Diamond with Loop in SW Quadrant), and County T (“jug-handle” configuration). Access changes would eliminate some at-grade access and convert others to right-in, right-out access. Several roadway segments would be constructed or altered to ensure local road system continuity and access to US 53.

The Proposed Action does not include immediate programming of construction funds. Improvements would be funded and constructed incrementally as safety/operational issues occur over time. The proposed action includes a long-term vision and management strategy so that a system-wide, comprehensive approach results once all of the improvements are completed.

The purpose of the Proposed Action is to develop a long-term highway access plan for this portion of US 53 and to officially map the proposed improvements to address three needs:

- Long-term highway planning and corridor preservation
- Safety, operations, and mobility issues
- Land use/transportation planning and coordination

The Proposed Action is not likely to affect speeds on US 53 – its primary operational effect would be to improve safety. Therefore, travel times would not be improved for through-travelers. There may be some minimal improvement in travel times for travelers using the new interchange in Minong and the grade-separated crossings at County F and County T when entering or exiting US 53. However, these improvements could be offset by the increased circuitous travel resulting from the closure of existing access points.

Community Context

The US 53 project areas are located in the town of Brooklyn (the unincorporated community of Lampson) and the village of Minong in Washburn County and the town of Wascott in Douglas County. Existing land uses along the US 53 corridor within the project area include a mixture of rural wooded uplands, agriculture, wetlands, low density residential, and limited commercial/industrial development. The village of Minong has higher density residential and commercial uses compared to the communities of Lampson and Wascott.

The majority of the land uses can be classified as widely distributed, low density uses with on-site septic systems typical of rural areas. Commercial activities within the study area are located primarily in the village of Minong and include typical mix of small town service and retail enterprises. Link Snack Foods, a local family business, is based in the village of Minong.

According to data from the Wisconsin Department of Administration, the population of Douglas County increased 2 percent between 2000 and 2010.¹ The population of Washburn County experienced a population decrease of less than 1 percent the same time period.

The table below shows the State of Wisconsin Department of Administration (DOA) project population changes for the period of 2000 to 2035. The data show that the annual population increase is expected to be less than one percent annually, which is considered low according to the United States Department of Agriculture (USDA) standards. (The USDA defines high growth in rural areas as greater than 1.4 percent annual population growth.)

¹ Year 2000 and Year 2010 US Census Data.

County	2000 Population	2035 Population	% Change	Annual % Change
Douglas	43,287	47,207	9.1	0.26
Washburn	16,036	20,609	28.5	0.81

Source: Wisconsin Department of Administration. *Population Projections for Wisconsin Counties by Components of Change: 2000-2035* available at <http://www.doa.state.wi.us/subcategory.asp?linksubcatid=105&linkcatid=11&linkid=64&locid=9>

Although Washburn County has completed a comprehensive plan, it has not yet been adopted. The first draft of the *Washburn County Comprehensive Plan 2025* was recommended to the County Board in fall 2005. As of May 2006, the plan has not been officially adopted. The Town of Minong’s comprehensive plan was adopted in October 2004. Washburn County has jurisdiction over land divisions, on-site sanitary sewer systems, and zoning (including shoreland, wetland, and floodplain areas) in the town of Minong.

The village of Minong comprehensive plan was adopted in July 2004. Past development and projected increases in commercial activity have led to the designation of commercial activities along the US 53 corridor near WIS 77. A transition from residential to commercial land use has begun along WIS 77 east of US 53 and is expected to continue. Increases in industry and manufacturing are anticipated and would be located near existing areas of this type.

The town of Brooklyn Comprehensive plan was adopted in July 2004. The town does not anticipate commercial growth to be a major developmental factor and no industrial activity is expected over the 20-year planning period of the plan. The unincorporated community of Lampson represents an area where a concentration of mixed land use activities may occur in the future.

The *Douglas County 2010-2030 Comprehensive Plan* was adopted in December 2009. The *Town of Wascott Comprehensive Plan 2025* was adopted in February 2005. The town of Wascott follows the Douglas County zoning ordinance, which regulates wetlands, floodplains, and shorelands. Limited commercial growth is anticipated in the town. Two areas near have been identified for future development (near the town hall and along County T near the intersection of Crystal Lake Road). An area of potential industrial development has been identified along US 53 north of Deer Farm Road.

The Proposed Action is not in conflict with any of the community plans noted above.

Indirect Effects

Currently, the potential for development to occur adjacent to any of the at-grade crossings at County F, WIS 77, or County T exists. The proposed grade-separation improvements at these locations would eliminate some access to US 53 and convert some access to right-in, right-out only. Any development on the lands near these existing crossings would be accessed by alternative local road connections. Traffic on these local roads would not be enough to alter their

current capacity or functionality. The removal of direct access to US 53 could minimize the potential for indirect and cumulative development at these locations.

Access to US 53 from lands adjacent to WIS 77 would be by way of the future interchange proposed at that location. It is likely that development potential at this location would remain unchanged with or without the construction of the interchange because access would be provided under either the build or no-build scenario. The Proposed Action is not expected to attract development at any different rate, pace, or location than what current markets and conditions currently allow at County F, WIS 77, and County T.

Officially mapping the proposed improvements could affect commercial development interests of properties that currently have close access to US 53 but would lose access after the grade-separated improvements are completed. Potential developers may decide not to invest in these locations with the knowledge that access would eventually change. It is important to recognize that the areas near Lampson, Minong, and Wascott have not been the focus of development interest.

Conclusion Regarding Indirect Effects

Through screening analysis using WisDOT's pre-screening effects procedure and FDM guidance on indirect effects, it is concluded that the factors of the project, its location and other conditions do not warrant further detailed analysis of the potential for indirect effects.

The project would not have the likelihood to result in *significant* indirect effects as defined by the National Environmental Policy Act (NEPA). This conclusion was based on the evaluation for ten pre-screening factors including: project design concepts and scope; project purpose and need; project type; facility function (current and planned); project location; improved travel times to an area; local land use and planning considerations; population and demographic considerations; rate of urbanization; and public/agency concerns. The data and evaluation supporting this conclusion are presented above. Therefore, further detailed evaluation of indirect effects in a detailed analysis is not warranted. If changes are made to the project design or alternatives, this screening will be re-examined for sufficiency.

Cumulative Effects

The cumulative potential effects analysis looks at past, recent, and future actions to determine whether effects from the individual projects, while insignificant on their own, could become significant when accumulated. The cumulative potential effects analysis is limited to those resources affected by the Proposed Action.

The geographic scope of this analysis varies by the resource being evaluated, but in general is limited to an area within close proximity to the project limits. The focus of this analysis considers potential effects to resources from previous, current, and planned future projects. Resources with the potential for cumulative impacts are agriculture, wetlands, and water quality.

Actions

Past Actions: Conversion of US 53 to a Four-lane Highway

The conversion of the US 53 corridor between Eau Claire and Superior from a two-lane to a four-lane highway began in the late 1960s. The upgrade of the segment of US 53 between the Lampson and Gordon from a two-lane highway to a four-lane highway was completed in 1997, improving connectivity to major economic and population centers in Wisconsin. The Minong bypass was also completed in 1997. By 1999 the four-lane expansion between Eau Claire and Superior was completed, with some portions of the highway constructed as freeways and some as expressways.

The expansion of US 53 to four lanes, likely had some effects on land conversions in northern Wisconsin. The improved travel conditions may have had the effect of encouraging additional tourists to visit the northern part of the state, thus leading to new or expanded businesses to serve those travelers. The improved access to the interstate highway system may have made some other non-tourist businesses in the northern part of the state more viable or successful. Some of these effects may have occurred in the vicinity of the Proposed Action.

Future Actions: Other Highway Studies and Projects

WisDOT is currently conducting/has conducted the following studies on highways that serve some of the travelers who use the portion of US 53 under study:

- Haugen Area (26th Avenue to 30th Avenue)
- Spooner/Trego Area (WIS 70 to Lampson)
- Solon Springs Area (Gordon to Bennett)

The enhancements to US 53 makes travel on the highway safer but is not likely to significantly affect the amount of traffic on US 53 itself. Timeframes for implementation of the planned US 53 improvements (construction) may not be realized for decades to come.

Evaluation of Potential Cumulative Effects

Agriculture

The original construction of US 53, along with its conversion from two to four lanes and addition of a bypass in Minong, likely resulted in agricultural impacts and land development. Additional land development can be expected to continue over time. Existing farm properties at County F, WIS 77, and County T would need to be acquired to construct the proposed action. Approximately 7.5 acres of cropland and pasture would be removed from agricultural production. Approximately 42.5 acres of woodland would be converted to transportation uses. Cumulative impacts are not expected to be substantial because the conversion of farmland to transportation uses would represent a small percentage of the total farmland (174,548 acres) in Washburn and Douglas counties (2007 Census of Agriculture).

Wetlands

The original construction of US 53, along with its conversion from two to four lanes and addition of a bypass in Minong, likely resulted in wetland impacts and land development. Additional land development can be expected to continue over time. Approximately four acres of wetland impacts are anticipated with the Proposed Action. Impacts will be mitigated in accordance with permitting requirements. Current local, state, and federal regulations now control wetland filling activities. Given the extensive regulations protecting wetlands, there is a low potential for cumulative impacts on wetlands.

Water Quality

The Proposed Action would increase impervious surfaces within the landscape over the existing condition. Shell Creek and Silver Lake are two water resources within the area of the Proposed Action that have been affected by previous construction and development. Best Management Practices (BMPs) will be used during and after construction to minimize impacts to erosion and sedimentation. Given the design standards and management controls available for protecting surface waters and stormwater discharge rates, it is likely that potential impacts of the project, along with other foreseeable actions, will be minimized or mitigated. Therefore, adverse cumulative impacts to water quality and quantity are not anticipated.

Conclusion Regarding Cumulative Effects

No substantial direct or indirect effects are anticipated for the US 53 Corridor Preservation project. Because impacts to potentially affected resources can be avoided, minimized, or mitigated through state and federal environmental regulations as well as through local land use controls, further cumulative effects analysis is not warranted.

Note: See Appendix D for maps depicting land use for the towns of Brooklyn, Minong, and Wascott.